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RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

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The South of Today.

In order to present to the world a full story of the South of today the Manufacturers' Record will shortly issue a special Supplement covering the industrial progress to date and the outlook for the future. The contributors to this issue will include many of the most noted men of the South—men who for years have led in its upbuilding, and experts who will deal broadly with the foundation of natural resources on which Southern development rests. We believe that this Supplement will be the most important publication ever issued in the interest of the South's material advancement. The aim will be to cover as briefly but as comprehensively as possible the most telling facts regarding what has been accomplished and what the prospect for the future is, in order that the busy man may grasp the whole subject without wading through an undigested mass of uninteresting articles.

This Supplement will be sent to every subscriber to the Manufacturers' Record, and in addition to this the Southern Railway Co., appreciating its importance to the South, has purchased 10,000 copies, which will be mailed to leading business men, manufacturers and capitalists in the North and West. A copy will also be sent to every bank and banker in the South, and to many in other sections.

The launching of the torpedo-boat Shubrick at Richmond, Va., on October 31 is to be made a gala occasion by the business men of Richmond. The main incident of the day will be of value as demonstrating the ability of Richmond to build vessels for the United States government. But Richmond does not propose to stop at that. The event will be celebrated by a tournament, races and a trades parade. The latter will give opportunity for the enterprising men of the city who have been quietly developing industries of various kinds to show their own people what has been accomplished during the past few years and to call the attention of the

country to the advantages of their city as a manufacturing center. Properly supported, the parade will be a valuable object-lesson as revealing in accomplishment the manufacturing possibilities of the Virginia capital.

Demand for Labor.

The announcement is made that several of the industries of Lynchburg, Va., are in need of employes, the estimate being that at least 300 women and girls could find employment immediately, two mills alone requiring more than 200 additional workers. At other points in the South similar conditions exist. For instance, the Huntsville (Ala.) Mercury says:

It has been the policy of the Mercury to not say too much to encourage laboring men to locate in our city, in the belief that up to this time we should give first chance to all citizens who wished employment.

The time has come when every available man is employed, and we have no hesitation in inviting mechanics and orderly laborers to locate here, in the full faith that there is plenty of work for all at fair prices. At half a dozen plants in and about the city employment can be found for both mechanics and laboring men.

The greatest present drawback is the scarcity of tenements suitable for men of moderate means, and in fact it is hard to find any houses whatever to rent. So we say to men who wish to labor that there is work and good pay for all, but we are short on houses for you to live in until some of the many now under way can be finished.

A little investigation will show that this shortage of labor is directly due to the wonderful activity in industrial establishments already in existence, and through the building of new ones. Heretofore cotton mills have largely been the means of gathering from little farms, where life had few joys, and where the prospect was without much hope, the young folks, who were thus enabled, not only to support themselves and to add something to the comfort of their families, but also to enjoy the advantages of closer settlement, the opportunities for education and for the broadening association with their fellows. As for the negroes, those who left the field have been able to find employment in the heavy work for which they are so well suited, connected with the development of the iron industry, lumbering and phosphate mining. To the demand for labor in these older undertakings is to be added another to meet the needs of manufactures based upon the logical advance in the textile industry, and the gradual building up of establishments which will take the material from the forest, the mine and the furnace and carry it through divers transformations.

No one doubts the ability of the South to supply this demand if numbers only are to be considered. Whether ability to meet the opportunities will be in like proportion depends upon the people of the South. They have the example before them of foreign nations fitting the younger generation by special education, not only to regain ground lost in sudden industrial revolution, but also to become leaders in particular lines of manufacture. The

South has capability equal to that of other sections to adapt itself to new conditions, but it must, nevertheless, bear in mind that the North became a manufacturer at a time when competition was by no means as intense as at present, and that if it is to obtain the full benefit of its natural resources it must be prepared to make much more rapid progress than was ever made in the older manufacturing sections. The South, therefore, not only can afford to neglect no existing means to fit its youth for solving new problems, but should strain every energy to add to its technical educational equipment.

Encouraging Shipbuilding.

Apprehension about the possibility of the passage by Congress of a bill to encourage shipbuilding in the United States is expressed by the Statist of London. It believes that England is on the eve of a vast and severe competition for her well-earned supremacy as a shipbuilder and carrier. It expresses belief that the prospects of the passage of a bill which, according to its information, has been already drafted with the hearty approval of party leaders, are regarded with serious misgiving by some of the leading British ship-owners, and says:

It is expected that the new bill will considerably enlarge the first section of the Frye bill, under which half bounties were to be payable on foreign-built vessels admitted to the American register, provided the owners engaged to build a similar amount of tonnage in the United States within five years. For the encouragement of shipping, the expansion of which is in turn to encourage shipbuilding, it is expected that the new bill will admit to full bounty privileges all foreign-built vessels acquired or contracted for by Americans prior to the passing of the act. And it is in anticipation of this provision that conditional contracts have been placed by Americans with British shipbuilders.

Still the Statist regards as of more importance than the subsidies the fact that "the cost of production of iron and steel in the future promises to be considerably lower in the United States than in this country." If such a bill as that outlined by the Statist should become law, and if it is a fact that contracts with British shipbuilders have been placed by Americans conditioned upon the passage of a law granting full bounty privileges for foreign-built vessels contracted for prior to the passing of the act, the purpose of men supporting the subsidy plan as an incentive to American shipbuilding will be thwarted. Their purpose is not to encourage the building of vessels for American trade in foreign shipyards, nor to grant subsidies which would be in reality an absolute gift with no adequate returns. Their idea of a subsidy is a bonus to counteract the disinclination to employ American capital in building American vessels at home in the face of advantages enjoyed by British ship-owners. If party leaders have approved of a bill containing the provision noticed by the Statist, it would be well for them to eliminate it if they expect it to benefit the country,

or certainly to demonstrate how such a provision will not discourage Americans who desire to enlarge their shipbuilding operations or to invest capital in such.

For Southern Commerce.

In a speech before the industrial convention at Huntsville, Ala., ex-Governor William A. MacCorkle of West Virginia, the presiding officer, said:

Every energy of the South should be bent to the sending of her goods to the foreign market in her own ships and through her own ports and bringing the returns back in the same untrammelled and inexpensive way, accompanied by the natives of the foreign lands who have seen by her products that there is under our sunny skies a better and happier existence for them.

This sentiment belongs naturally to a convention designed to advance the industrial interests of the South. Without commerce, manufacturing opportunities would be decidedly limited. This the convention thoroughly understood, and it was ready to lend its aid to all proper projects for the extension of Southern trade. Even the lucid speech of United States Senator Morgan was hardly needed to lead the members of the convention to realize the importance of the Nicaragua canal as an element of the plan outlined by Mr. MacCorkle, and to determine to do all within their power to further legislation for the immediate construction of the canal. If the convention had done nothing else, this action would have been a satisfactory outcome of its deliberations. It has, though, resolved itself into a permanent organization, and the trend of the speeches made at its meeting, the undoubted earnestness, devotion to the interests of their section and their practical equipment for work in many lines of Southern development are a promise of material contribution toward the enlargement of Southern commerce.

Opposing America.

In a report to the State Department Marshal Halstead, United States consul at Birmingham, calls attention to the strong feeling existing in England over the orders given for American locomotives for use on English railroads, a suggestion to American builders that efforts will be made to find the locomotives inferior to British ones. He quotes from English papers articles revealing the animus, and also the locomotive superintendent of the Great Northern Railway as saying that after examining the American locomotives he could find no important part which ought not, with proper usage, to last as long, or nearly so, as those of English engines.

The warning of Consul Halstead is not a surprise. Whatever diplomatic understanding may or may not exist as to the part that England and the United States are to play in their dealings with outlying peoples, no long-continued modus vivendi may be expected in the world of commerce. It is a case of competition to the limit, and a competi-

tion in which American manufacturers may expect misrepresentation of their goods on the part of their competitors as one of the tactics. They should, therefore, in placing their goods in new markets, assure themselves, first, of the needs of those markets, and secondly, see to it that the goods are equal to the samples, and thus disarm their adversaries in advance.

A Railroad Lesson.

In his statement before the industrial commission last week at Washington, President Samuel Spencer of the Southern Railway said that what was now the Southern Railway Co. was five years ago thirty-five or thirty-six separate corporations, all in the hands of receivers and unable to pay interest charges, while their roadbeds were not kept up. That was not a condition, he said, warranting a reduction of rates, but five years after consolidation their rates as a whole have been reduced 7 per cent. These few words contain a remarkable story of railroad development, a tribute to practical knowledge and administrative and financial ability, and at the same time to the resources of the section traversed by the Southern. The development of the South has kept pace with the growth of the Southern Railway, the two interacting to mutual advantage. To improve the roadbed and equipment of the Southern has required an enormous expenditure of money, and yet, as Mr. Spencer shows, transportation rates have been reduced 7 per cent., a fact to be borne in mind by persons ignorant of railroad management who would undertake to run railroads.

PULP MILL FOR BRISTOL.

A Plant to Cost \$300,000 to Be Built by Philadelphians.

[Special Cor. Manufacturers' Record.]

Bristol, Tenn.-Va., October 16.

Bristol has secured a big new industrial enterprise, a \$300,000 pulp plant, to be owned and operated by the Columbian Paper Co., a very wealthy syndicate of Pennsylvania capitalists. Thomas Bohannon of Philadelphia is president of the company, and S. H. Egolf of Buena Vista, Va., is general manager. This plant, which is to be a soda, fibre, wood-pulp one, will occupy fifteen and one-half acres of land in the suburbs of Bristol, on the Norfolk & Western Railway. All of its buildings are to be of brick or stone, or both, some as large as 100x500 feet. Sixty cords of wood per day and 4,000,000 gallons of water will be required in its operation. Not less than 100 hands are to be employed at any time. The plant is to be completed within one year from October 12. The pulp is to be used in making paper. The city of Bristol exempted the plant from taxation for five years.

Last week Messrs. Chas. H. Baker and Henry N. Coleman of Trenton, N. J., agents for the Carter Iron & Steel Co. of East Tennessee, bought for \$33,000 5000 acres of ore and timber land on Stoney creek, Carter county, Tennessee.

At a point near Five Oaks, in Tazewell county, Virginia, a New Jersey paint company is developing a vein of ore suitable for the manufacture of paints. The first carload of mineral was shipped east last week.

The White Rock charcoal furnace, near Rural Retreat, Va., will be repaired and put in blast, after having been idle for fifteen years. The Lobdell Car Wheel Co. will operate the same, with Capt. J. H. Wissler as manager.

SOUTHERN TRADE IN CHINA.

Significant Correspondence of Senator McLaurin and South Carolina Cotton-Mill Men About the Importance of the "Open-Door."

At two widely-separated points in this country during the past week the importance of the South as a contributor to the foreign trade of the United States and its interest in the further extension of that trade have been clearly shown. Aside from the purely technical papers presented at the Montreal meeting of the New England Cotton Manufacturers' Association, the most important paper was probably that on export trade, read by Mr. D. A. Tompkins of Charlotte, N. C. He alluded to the difficulties under which this country had built up trade with the Far East, expressed the belief that the most vital questions concerning the cotton-mill industry of this country lie along the lines of the republic's making sure of its export trade, and said that no section of the republic was more interested in the policy of the retention of Cuba, Porto Rico and the Philippines than the Southern States. Sustaining the contention which Mr. Tompkins has made for some months is a remarkable and most significant correspondence between cotton-mill men of South Carolina urging the senators and representatives of that State in Congress to do all in their power that the United States may enjoy the "open-door" policy in China. The signers of the letter were John B. Cleveland of the Whitney Manufacturing Co.; John H. Montgomery, president and treasurer of the Pacolet Manufacturing Co. and Spartan Mill; H. D. Wheat, president and treasurer of the Gaffney Manufacturing Co.; J. A. Carroll, president of the Cherokee Falls Manufacturing Co.; R. R. Brown, president and treasurer of the Cowpens Manufacturing Co.; George F. Coffin, president and treasurer of the Enoree Manufacturing Co.; W. E. Lucas, president and treasurer of the Laurens Cotton Mills. Impressed with the importance of the textile industry in South Carolina, these representatives of the industry in the South wrote:

"The business of cotton manufacturing is the paramount manufacturing interest of the State. Next to agriculture it is the principal employment of our people. It returns wages directly to a very large percentage of our population, and indirectly it is the support of many thousands more. A large number of the mills in this State are making goods for the China or Eastern trade. If by any chance this demand should be cut off, the mills would be compelled to shut down, or to get into direct competition with the other mills which are making goods for home consumption. You can see at once what the importance of the China trade is to us; it is everything. The prosperity of the cotton-mill business of South Carolina depends, in our opinion, upon the China trade. We believe that the expansion of this trade is the hope of the cotton-mill industry in the South.

"According to the best of our information, the question of the continuance of this trade is a question of policy on the part of our government. Statistics show that 90 per cent. of all the cotton goods exported from the United States to China find a distributing market at the three northern treaty ports of Newchwang, Chefoo and Tientsin. The first named is the treaty port of the great province of Manchuria, already recognized in the railroad and mining enterprises as an exclusive sphere of Russian enterprise. The second is the treaty port of the province

of Shantung, in which Germany claims exclusive privileges similar to those conceded to Russia in Manchuria. The third is the treaty port of the metropolitan province of Chili, and is the maritime gate of Peking. All three are situated within a comparatively narrow area, but through them is done most of the foreign trade of North China. It only requires one step forward in the extension of the authority of Russia and Germany to destroy the terms of equality on which the commercial nations of the world participate in the advantages of Newchwang and Chefoo, and the movement on Peking, which is generally assumed to be part of the policy of Russia, would necessarily threaten the commercial interests which center at Tientsin.

"Up to this time we are informed that pressure brought by the governments of Great Britain and the United States has led Russia to declare its purpose to admit the merchandise of other nations into Manchuria on terms of equality with its own, but it is impossible to say how soon that policy may be changed. It is alleged that in the importation of railroad and other material Russia entirely disregards the imperial Chinese customs of Newchwang, regarding the port as if it were already in a Russian possession; and it may be that Russia, for the protection of its own trade, may see fit to carry this discrimination to the point of imposing her own custom duties on American cotton goods. In such an event our trade with Manchuria would be seriously handicapped, and might, conceivably, cease to exist, as did our trade under like circumstances with Madagascar.

"The effect of this would be a far-reaching one to the cotton-mill industry in the South. Up to this time the federal government has shown a disposition to insist on the maintenance of its treaty rights with the Chinese empire whenever there seemed any danger of their positive infringement, but as we have indicated, the process of substituting for the authority of the Chinese government the jurisdiction of a foreign power is a gradual and insidious one, and its completion would mark the disappearance of all pre-existing treaties."

They contended that the question of maintaining our treaty rights in China was not one of empire, but simply of trade and of the right that Americans now enjoy to conduct a profitable commerce with the Chinese empire. In reply to this letter Senator McLaurin, agreeing fully with its contention, wrote as follows:

"The 'open-door policy' is what we need and want. This has heretofore been secured by 'treaty rights,' which have been respected by other nations only to the extent to which it conduced to their trade interest. While ostensibly recognizing these 'treaty rights,' other nations, in violation of them, have acquired territory and excluded therefrom our legitimate commerce. Russia has gradually absorbed Manchuria and is building a railroad across Siberia to command the trade of China. Germany has been active and waiting in expectancy to obtain the Philippines. Japan has given Russia all the fruits of her victory of 1892. France has been the willing tool of Russia, and England has been passive in her fear to assail her.

"This was the status in the East when the battle of Manila occurred. This vic-

tory thwarted all the schemes of Russia for the dismemberment of China, and rendered its absorption and partition impossible. If you want the 'open door,' the United States now holds the key. The archipelago of the Philippines lies along the coast of Asia for 800 miles, and commands it. Manila is the point in the East which is the center of ocean traffic. It is the only point where foreign nations could have obtained commercial stations without a struggle.

"In the vicissitudes and good fortune of a war with Spain, and without any intention of doing so, the United States has acquired the possession of the Philippines, which gives to her paramount political and commercial advantages.

"My judgment is that the control of them, or at least of some portions, is the only safeguard for our trade interests in the East. The abandonment of them means the dismemberment of China, its partition among the European powers, and the inevitable loss of our Chinese trade. * * *

"I do not favor the adoption by this country of a colonial policy, because of the vexed and threatening problems growing out of it, but I do think that, if possible, the United States should maintain sufficient interests in the islands to command equal trade rights with other nations in China. This will prevent for a long time the dismemberment of this vast empire. England and Japan favor the integrity of the empire, but they alone cannot guarantee it against the other European powers. With the weight of the influence of the United States thrown against dismemberment, it would be rendered impossible.

"At present Hong Kong, under British influence, is the great distributing center of the Orient. Manila, under American influence, will occupy a better strategic and geographic position, and should become a commercial center of that portion of the world. Commercial supremacy is the goal of every civilized nation; it is only attained through commercial progress and commercial expansion. In this great battle among the nations, without design of our own, while they were haggling among themselves, Dewey sails into Manila bay, and we find foothold within two days' journey of this land of consumers, where half of the population of the world is congregated within an area no larger than the United States.

"There is much political rot in the constant parading of the term 'imperialism.' It is a misnomer, intended to confuse and deceive. It involves the idea of the incorporation into our body politic as American citizens millions of the semi-barbarous inhabitants of a tropical country. Do not believe such a thing is intended, possible or desirable; nor is such a result necessary to secure such commercial expansion as we want. I think the dictates of common sense will govern the American people, and the ghost 'imperialism,' sprung for political effect, will not prevent them from gathering the full fruits of the victory so easily won, and treading the path so plainly blazed out by an overruling Providence.

"I am willing to concede honesty of purpose and sincerity of conviction to others on these questions. It is difficult for a representative to view this question as he should while the war is in progress, and both parties attempting to make political capital out of it—one making frantic appeals to 'stand by the flag' and the other criticising on humanitarian grounds everything that is said or done. When these questions are considered by Congress it is my purpose to act and vote for what I conceive to be for the best interests of South Carolina. A discharge of

duty to the best of my ability will come up to the full measure of my obligations.

"It will be observed, therefore, that the question of our trade in the East involves both political and commercial consequences. Upon its settlement, in my judgment, depends the future welfare of our people in maintaining equality of opportunity in the Eastern markets. A mere superficial view will not reveal its transcendent importance. To the Southern people it is fraught with momentous consequences. Cotton manufacturing in the South has grown in a few years with phenomenal rapidity. Millions of dollars are now invested in mills.

"The product of these have found remunerative markets in China and other countries of the East, our cotton goods being peculiarly adapted for clothing the teeming millions of that warm climate. Their trade is the hope of this great manufacturing industry of the South. If it is cut off by other nations, not only the manufacturer, but the producer of raw cotton will suffer."

This correspondence not only illustrates the view regarding the importance to this country of China trade held by conservative but progressive men of the South, but is a powerful argument from a most practical standpoint against the agitation of those persons who for political reasons, from a spirit of mere opposition or because of actual scruples based upon lack of information, are endeavoring to prevent the United States from enjoying the perfectly legitimate fruits of Dewey's victory in Manila bay.

Prosperity at Moundsville.

[Special Cor. Manufacturers' Record.]
Moundsville, W. Va., October 17.

The general prosperity of the country is very manifest in this section. Business interests of every kind are looking up, and our manufactories are all going on full time, and some of them on double time. The Board of Trade, of which Mr. Thomas Scott is president and Mr. William O. Ewing is secretary, has issued a little folder showing the advantages of the city for manufactures. These include cheap fuel, natural gas, transportation by three railroad lines and Ohio river steamers, and free sites for factories. Moundsville is situated on the Ohio river, in the Panhandle of West Virginia, and has 6000 inhabitants. Its streets are paved, it is lighted by electricity, and has water works, an electric street-car line, good public schools, many churches, two banks and a volunteer fire department. Among the industries already established are the Matoria Glass Co., employing from 350 to 400 persons; Mound City Brick Co., with a capacity of 50,000 bricks daily; two coal companies with a capacity of 1200 tons a day, two machine shops, one foundry, two planing mills, a cigar and stogy factory with a capacity of 25,000 daily, two flour mills, a whip, broom and fly-net factory and weaving mills.

Another company has been formed at Norfolk for the purpose of developing property in the vicinity. It is termed the Port Norfolk Investment Co., and has already bought property at several locations on the harbor for residence purposes. John W. Cox is president; B. W. Leigh, vice-president and treasurer, and M. W. Mason, secretary.

Ex-Speaker Thomas B. Reed will contribute during the coming winter to the Saturday Evening Post of Philadelphia a number of papers dealing mainly with American affairs. The papers are expected to form an interesting and important contribution to the history of American politics.

MANUFACTURES FOR EXPORT.

Exhibits at the Exposition at Philadelphia.

[Special Cor. Manufacturers' Record.]
Philadelphia, Pa., October 17.

The National Export Exposition at Philadelphia is now at its height. The exhibits are all in place, and a visitor who enters its gates today will see it in its best state.

A glance over the exhibition will show a great preponderance of iron and steel and machinery firms. An entire building is taken up by the vehicle and agricultural-implement men, while the greater part of the main hall of the main building is given over to iron and machinery manufacturers and the allied trades. The textile industries are scarcely represented at all, except in a sporadic and occasional way. The manufacturers of food products have a goodly area covered with their booths, while many kinds of patented novelties are exhibited in different parts of the great hall.

Nearly all the exhibits are made by individual firms, though some trade bodies occupy space, as the Philadelphia Bourse and the Lumber Exchange of Baltimore. The Bourse has handsome headquarters, with tables and stationery, a very inviting place for visitors to stop when they have grown tired of moving about through the long aisles. The United States geological survey makes an official exhibit of pictures, charts, minerals, etc., a very attractive display, illustrating the work of this important bureau of the government. The Philadelphia daily newspapers are nearly all represented with handsome booths, at least two of them exhibiting moving line-type machines. With these exceptions, nearly all the exhibitors are manufacturing firms, and chiefly those in and about Philadelphia, or those which have branches in that city. There are, of course, not a few outside firms represented, but it is near a certainty that 75 per cent. of the exhibitors are identified with this particular vicinity. It is true, too, that nearly all the firms are interested in the export trade, and have prepared their exhibits with the idea of securing valuable connections in foreign countries. Some of the larger firms are making their displays on sentimental grounds, in order that the exposition may the better indicate the development of manufacturing industry in the United States, but most of them have regarded it as a plain business proposition.

Easily the most striking of the exhibits, and it reflects no discredit on the others to say so, is that of the Pencoyd Iron Works of Philadelphia, the builders of the now famous Atbara bridge in Egypt. They have a very large space in a very choice position in the center of the main exposition hall. They began at the bottom building themselves special foundations, and they go up to the roof with the name "Pencoyd" wrought in iron, which is visible from all directions. Nobody can pass this by. The exhibit comprises bridge and structural material in all stages of preparation, from the ore, the limestone and the fuel to the finished parts. The center piece is a great pyramidal pier, on which rests a steel "shoe," such as the firm used in the construction of the great Pennsylvania Railroad bridge over the Delaware river at Philadelphia. A number of interesting test pieces of steel are shown. These have been bent into the most fantastic shapes while cold, thus demonstrating their superior quality. The whole booth, highly original as it is in design, is made the more interesting throughout by photographs of engineering works at Niagara Falls and elsewhere which have lately been completed by the firm. It is estimated that there are more

than 300,000 pounds of material in this exhibit.

Among the firms making displays of electrical equipment, that of the General Electric Co. is unique. It is particularly brilliant at night, being literally covered with lamps. They have within their space a constant current transformer, a new type of alternating service arc light and motors, fans, small instruments, etc. The power needed in the booth is supplied by a 4-15-100 generator.

The E. D. Albro Co. of Cincinnati, Ohio, importers of mahogany and foreign woods and veneer cutters, have a large space in the west arcade of the main building. Nevertheless, they find it rather confined for the great variety of woods which they exhibit. They have handsome samples of mahogany, Prima vera (white mahogany), English brown oak, figured walnut, blistered walnut, bird's-eye maple, curly maple, hazlewood, rosewood, tulip, ebony, satinwood and other varieties of figured and burl veneers. The firm also shows cigar-box lumber, which it manufactures in large quantities, and a walnut burl in its raw state. Beneath this rough chunk of wood is a fine piece of polished veneer, with the legend, "Beauty is only skin deep." This display attracts much attention. The company imports fine woods from Mexico, Cuba, Africa and other parts of the world.

Among the machinery in operation the Boomer & Boschert Press Co. of Syracuse, N. Y., makes an interesting display. There is a cider press on exhibition, from which the apple juice oozes out and is sold on the spot at a small price per glass. This opportunity to get fresh cider of the best quality seems to be much appreciated by the visitors to the exposition. The company shows one hydraulic press and one screw press. Although the exhibit comprises only cider and wine-making machinery, the firm turns out all kinds of screw, hydraulic and knuckle-joint presses for baling cloth, paper, yarn, rags, etc., for veneering, vulcanizing and for the manufacture of lard oil, tallow, glue, oleo and other products requiring the application of great pressure.

Schaum & Uhlinger of Philadelphia, in co-operation with the Penn Silk Mills and Kohn, Adler & Co., selling agents, exhibit two large ribbon looms, which are at work weaving a fine quality of goods. One is turning out plaid ribbons, the other plain ribbons. A moving exhibit of this kind proves a drawing card to a great many people who are closely interested in "live" industrial operations at expositions. Schaum & Uhlinger also show two empty "whizzers" (extractors).

Among the leather firms making exhibits, J. E. Rhoads & Son make a very notable showing. This Philadelphia firm displays oak leather belting in coils, some of great width. Samples of Rhoads Tanate belt, for high-speed work, and the "Black Diamond" belt, for service in hot places, are exhibited. Round as well as flat belting is within the area the firm has reserved for the display of its manufactures of various kinds and sizes and for different purposes. A number of specialties are shown also—the Rhoads leather belt preserver, belt cement, belt dressings, blanket straps in great variety. Of the latter the representative of the firm states that they have sold hundreds of thousands within the past year or two. There is also a wide assortment of hand straps which men hang to in crowded street cars, and rawhide lacing which is sold cut or by the square foot. Rhoads & Sons do an important trade in large driving belts and dynamo belts.

The canvas belting manufactured by the Main Belting Co. is shown at the exposition. The trade name of this article

is the "Leviathan Belting," and the manufacturers make claims for it which call for the attention of all users of belts. It is asserted that there is a great saving in expense over leather and rubber belting. Moreover, this belt, which is a composition of canvas and oils, each layer being separately treated so that it will not peel or part, is said to be more serviceable than its competitors when exposed to heat, moisture or sudden and radical changes of temperature. A section of eight-ply 90-inch belting is displayed in the exhibit. A belt like this was put at work twelve years ago, and it has been transmitting 2500 horse-power ever since.

Frick & Co. of Waynesboro, Pa., show a 40-ton refrigerating machine in active operation. A four-ton machine is on exhibition, though not running. Ammonia fittings of special patterns and a portable engine and boiler for general farm work are also included in the display. The firm is making a special feature of its refrigerating apparatus at this exposition, with a view to increasing its export trade, particularly with tropical countries, where ice-making machinery is indispensable to the comfort and convenience of the inhabitants. The attendant in charge of the exhibit says that he is receiving many domestic inquiries from reliable parties. He mentioned as many as twenty-five during the first two weeks the exposition was open to the public.

Some interesting coffee-hulling and coffee-sorting machinery is shown in the main exposition hall. The Huntley Manufacturing Co., with works at Silver Creek, N. Y., exhibits a coffee separator and grader. This machine will make five perfect classifications of coffee in one operation. It also removes sticks, strings, chaff, and thoroughly cleans the coffee which passes through it. If a less number than five grades is desired, blank screens may be employed. Spouts are arranged at the ends of each screen to collect the grades. Automatic brushes travel back and forth underneath the screens, thereby keeping the coffee from wedging in the perforations. The price of this machine ranges from \$350 to \$600, the latter having a capacity of thirty to forty bags of 132 pounds per hour. The Huntley Company also shows a coffee-milling machine. This polishes the berries by continuous contact of one berry with another. Coffee milled by friction in this apparatus, it is said, roasts brighter and is better cleaned than by passing through any beater or brush machine. The machines of this company cannot be operated in the exhibition hall, since more or less dust would be created, and this would be objectionable to other exhibitors.

The same considerations restrain the Salem Iron Works of Salem, N. C., from moving their machinery. They make a large exhibit in conjunction with the Southern Saw Works, adjoining the area reserved by the Huntley Manufacturing Co. They show machinery for hulling, washing and drying coffee. The Salem Iron Works also do a large saw-mill business, in which connection a number of circular saws are displayed by the Southern Saw Works of Atlanta. The Salem Iron Works do considerable trade in their products in the North, which is unusual for Southern firms manufacturing in these lines. They also have done some export business in saw-mill and coffee-hulling machinery.

The Wilson Laundry Machinery Co. of Columbia, Pa., who are out for export as well as domestic trade, show a full line of machines for laundering purposes. Their list of products is a very long one, and includes appliances for washing, wringing, starching, dampening, mangling, ironing, etc. There are "collar ironers," "bosom ironers," "band ironers," "sleeve

ironers," "collar shapers," "eyelet raisers," etc., and other special machines of much interest to all whose requirements call for modern laundry equipment.

A model milk-distributing plant is shown in operation by the Creamery Package Manufacturing Co. of Chicago. This company originally manufactured ash butter tubs, and still does so, but the machinery branch of its business now amounts to ten times as much as the other branch of the trade. The booth at the exposition, in charge of J. R. Amacker, is fitted up like a small dairy, in which various types of machinery are in use. The centrifugal system for separating milk and cream and for cleansing it is illustrated. A Pasteurizer is shown. The milk is bottled, the jars sealed and they are placed in cold storage. The company have a two-ton compressor and a steam turbine bottle-washer. A Disbrow combined churn and butter-worker, which churns the cream, works the butter and salts it all in one operation, is on exhibition. It is very expensive to run some of this machinery, though it is an object of great interest while it is in operation. The company display a large assortment of creamery and dairying apparatus.

The H. B. Smith Machine Co. are manufacturers of woodworking machinery at Smithville, N. J., near Mt. Holly. There is good water-power at the site of the factory, and it is only very rarely—a few days in a year—that steam must be employed. The company show at the exposition a new inside molder, a three-drum sander, an improved No. 2 tenoner, a 16-inch joiner and a 24-inch pony planer. The firm manufactures upwards of one hundred kinds of machines, so that these are only a few samples of their outturn.

The Link-Belt Engineering Co. make an exhibit of their various labor-saving appliances in elevating and conveying machinery. A section of a Monobar conveyor for coal, a cheap and very effective conveying device, occupies a leading place in the exhibit. There are sample buckets also from link-belt carriers, elevator buckets, barrel arms, tray and package elevators, samples of link-belts, etc. The space reserved by the company is surrounded by a number of photographs illustrating the shops and various types of machinery which the firm has installed in different parts of the country.

An impressive exhibit of bolts, nuts, rivets, etc., is made by Hoopes & Townsend of Philadelphia in a large space which they have taken near the south pavilion in the main hall. They have fitted up a room to resemble a store with bins all around it filled with their various products. The name "Hoopes & Townsend" is tracked out in nuts on the side of the booth, thereby producing a novel effect. There are in this exhibit bolts running up from three-sixteenths inch to six inches in diameter, pipe swivels from three-eighths inch to three and one-half inches, turnbuckles, rivets, elevator chains and other articles, for which the firm enjoys a high and a deserved reputation.

In tobacco machinery an exhibit of a tobacco granulator and a tobacco cutter is made by John B. Adt of Baltimore. The machines are not running.

The Slatington-Bangor Slate Syndicate of Slatington, Pa., make a most creditable exhibit. They show slate blackboards for schools and roofing slates. A house in miniature roofed with slate is within the enclosure. A handsome "marbleized slate checkerboard table top" is on exhibition, and some pieces of structural slate of a fine quality, artistically arranged. A novel feature of the exhibit is contained in two cases, which are filled with envelopes addressed to the syndicate from every part of the civilized earth,

thus showing the extension of its foreign trade. The stamps on these letters would delight any philatelist. There is a large export business now being done in American slates.

The Royersford Foundry & Machine Co. of Royersford, Pa., have one show piece in a neatly-carpeted space, their latest improved combined punch and shearing machine. It is not moving. The company build this machine in three sizes.

Frank Toomey of Philadelphia, machinery builder, exhibits a variety of pumps. A single-acting tank pump is at work lifting ninety gallons of water per minute. A vacuum pump and a compressed-air pump are also in operation.

R. D. Wood & Co. of Philadelphia, who have in recent years done a very large export business in iron pipes and fittings, taking contracts in competition with British firms even in England and Scotland for municipal drainage enterprises and water works, display a number of pipes large and small. There is one piece of pipe five feet in diameter which is said to weigh 12,000 pounds. There is a standing invitation posted up for visitors to the exposition to "walk through," which persons not too tall could do without great discomfort.

Fraser & Chalmers of Chicago engaged space at the exposition, but they are so busy that they could not afford to put any machinery on view. They have catalogues of their rock crushers, stamp mills, roasting furnaces and other kinds of mining machinery, which they manufacture in great variety. They also manufacture power plants for street railways and pumping plants for municipal water works, having installed some of great size in Chicago and other cities. H. F. Brown is in charge. He is a mining expert, and exhibits a great many samples of ores on his own account.

Chas. A. Schieren & Co. of New York, the extensive manufacturers and tanners of oak leather belting and lace leather, have a handsome exhibit. They show a full line of round and flat belting for the home and the export trade. They have twist round and solid round belting, a three-ply belt seventy-two inches wide and several belting butts, all of a fine quality of leather tanned at their own Dixie tannery in Bristol, Tenn.

The Norton Emery Wheel Co. of Worcester, Mass., exhibit material valued at about \$5000. The columns at the corners of the booth are built up of emery wheels. There are fifty in a column, and each is valued at from \$8 to \$10. They, too, have some showcases filled with the different articles they manufacture. The wheels are small enough for the dentist's delicate operations within the human mouth, and large enough for grinding big tools in a machine shop. They also show their "India oil stone" in large variety. This is of pure corundum, and it has been on the market for about five years, being exported freely to England, Germany, Australia and other countries. Machinery for operating the wheels is also exhibited by the company. F. A. Humphrey is in charge.

The Wm. S. Haines Co. of Philadelphia exhibit the "Heintz" steam saver. They say that over 200,000 of these were in use on January 1, 1899. This is an automatic steam trap. They also construct pressure and thermo regulators of special sizes, safety valves, thermometers, thermostats, etc., samples of which are shown at the exposition.

R. McCully of Philadelphia, manufacturer of rock and ore crushers, has a large crusher on display, also a skeleton which shows the inside working of the machine. A number of diplomas from previous exhibitions are framed and on view. Mr. McCully's crusher received two awards,

a medal and a diploma, at the World's Fair in 1893.

The Harrison Safety Boiler Works show their "Cochrane heater," tens of thousands of horse-power of which are now in use. The Cochrane separator, sections of the safety boiler and other parts make a display of much interest to all experts on mechanical subjects.

The Keasbey & Mattison Co. have their space crowded with samples of their magnesite pipe and boiler covering of various sizes and shapes, asbestos papers, packing, millboards, locomotive lagging and their other specialties, which now enjoy so high a reputation in this and other countries. They show, too, a large water-color view of their great factory at Ambler, Pa.

The largest space at the exposition which is devoted to the display of valves exclusively is that occupied by the Ludlow Valve Manufacturing Co. of Troy, N. Y. They exhibit a fire hydrant, some of their slide-gate valves and other special types of valves. They have, too, a fine case full of Ludlow brass valves.

The Stilwell-Bierce & Smith-Vaile Co. of Dayton, Ohio, with branch houses in several cities, make a specialty of water wheels, upright or horizontal. They manufacture the cylinder gate Victor turbine. They show a few pieces of their machinery, which, though they are not running, will appeal to the discerning in these matters. They display, too, a number of photographs illustrating their installations.

The Dayton Globe Iron Works, Dayton, Ohio, have one of their gas engines on view. It is furnished with power connections, and is of interest to all who are of a mechanical turn and who pass down the west corridor of the main exposition hall.

James Leffel & Co. of Springfield, Ohio, water-wheel manufacturers, display several of their types, the "Cascade" water wheel, the "Samson" water wheel, and also one "Standard class B automatic engine." Their signs upon the exhibits are in both English and Spanish, which indicates their interest in the Latin-American trade.

Among the moving exhibits is that of the Mayo Knitting Machine & Needle Co. of Franklin, N. H. They have four machines at work making seamless hosiery. Their specialty is the "Acme fully automatic knitter," which is to be seen here turning out half-hose and women's stockings. The firm has a Philadelphia office, and also a Southern agency at Jonesville, N. C.

The S. Morgan Smith Co. of York, Pa., make a special feature of their turbine water wheels. Their exhibit is of show pieces. They are out for the export trade, like nearly all the other exhibitors, and already do an important trade in foreign parts.

Henry G. Morris of Philadelphia has fitted up an exhibit of sugar machinery. This house manufactures sugar apparatus of all descriptions. Mr. Morris shows some centrifugals and other types of sugar-making machinery, which lend themselves well to exposition purposes. His display is of much interest to visitors from countries in which either the cane or the beet is a product of the soil and calls for the equipment of mills and refineries.

In railroad equipment and contractors' materials the Thornton N. Motley Co., Inc., of New York show a Jackson hand-power rock drill which is at work on a large piece of rock, a dump car of use in railway construction, barrows, track-bender, car-replacers, shovels, picks, axes, lanterns, track levels, hydraulic jacks, asphalt roofing, etc. The firm handles contractors' supplies of all kinds.

The Wm. R. Trigg Co. of Richmond, the

shipbuilders, show a number of large-framed photographs of their shipyards, shops, foundries, etc., which are being inspected with interest by exposition visitors.

G. & H. Barnett Co., the Philadelphia file manufacturers, exhibit within their railing a large case filled with files of all styles and sizes. They have on view what is said to be "the largest file in the world." Its weight is 210 pounds.

A variety of jacks ranging from eight to seventy tons are shown in the south pavilion by A. O. Norton of Boston, Mass. There are few exhibits of jacks at the exposition, so that Mr. Norton's attracts special attention.

Gara, McGinley & Co. of Philadelphia in their space have a fancy canopy, which admirably displays their sheet-copper work. They also show plates for metal ceilings and side walls before they have been put up and decorated. This metal paneling is very popular for interior work in offices, banks, stores and public buildings. It is also used to some extent in private residences for halls, dining-rooms, etc. The firm shows samples, too, of its metal rock facing, metal work sanded to resemble rock. The company was established in 1840.

The Webster Manufacturing Co. of Chicago show several gas, gasoline and petroleum engines with power attachment and in operation. Three gas or gasoline engines of two and one-half, four and five horse-power, respectively, and one petroleum engine of two and one-half horse-power are within the space reserved by this company.

The Enterprise Manufacturing Co. of Philadelphia exhibit a great variety of their products in the south pavilion of the main building. The display includes cutting and grinding machines of various kinds, meat-choppers, sausage machines, fruit presses, meat-juice extractors, fruit seeders and parers, etc. The exhibit is one which has attracted a great deal of attention. The company does a very large export trade.

In the south pavilion there are three large gas engines at work furnishing power for moving exhibits, in addition to the steam and electric equipment in the power-house. The largest of these is a 200-horse-power engine exhibited by Struthers, Wells & Co. of Warren, Pa. It supplies motive force for the entire east end of the main building. The firm also has a three-and-one-half-horse-power gas engine in operation.

In the same pavilion are two large Otto gas engines. Each is capable of producing sixty horse-power. One is used to drive shafting and the other is engaged on electrical work. These engines are of the single-cylinder type, while that of Struthers, Wells & Co. is a twin-cylinder engine.

A miniature rainstorm is a feature of the exhibit of Merchant & Co., the Philadelphia roofers and tinplate makers. This is devised to show the water-turning power of a roof which they have put up over their booth, and the patent "Star" ventilator with which it is equipped. The water flows down over the roof constantly, being carried off by a gutter, so that it does no harm to other exhibitors. The company shows a great variety of its products, stamped metal shingles, babbitt and type metals, tin andterne plates, etc., together with blocks of tin, copper and other metals which are the raw materials in the manufacturing processes carried out by this firm.

During the twelve months ending June 30, 1899, the value of lead and zinc ore amounted in seventeen counties of Missouri to \$9,009,953, an increase of \$3,751,574 over the value of the output in 1898.

DEVELOPING ORE PROPERTIES.**Phases of Activity in and Near Anniston.**

[Special Cor. Manufacturers' Record.]

Anniston, Ala., October 16.

The industrial activity throughout this section increases. An incontrovertible evidence of this is the fact that the Alabama Mineral division of the Louisville & Nashville Railroad, of which W. E. Knox is superintendent, did the largest freight business Thursday in its history. The work of overhauling, adding to and stocking the furnaces at Talladega, Ironaton, Jenifer, Anniston and Gadsden, which requires tremendous amounts of material, the mining and shipping of iron ore in enormous quantities, the growing Anniston lime industry, the heavy tonnage of Anniston's three large pipe-manufacturing plants and her cotton, cordage, twine and carpet mills, her car works, her foundries, machine shops and other manufacturing industries and the great activity in all industrial and commercial lines in Anniston and vicinity have contributed to this record breaking. The Alabama Mineral is far behind with its freight hauling, and the work in this department every day is limited only by the capacity of the rolling stock. The two lines of the Southern which cross here are also doing a heavy freight business.

The work of overhauling and stocking up the three furnaces of the Alabama Consolidated Coal & Iron Co. at Ironaton and Gadsden continues with unabated vigor. New exposures on the fine brown-ore properties of the company are highly satisfactory, both as to quantity and quality, as well as accessibility. It was hoped to get one of the Ironaton furnaces in blast the past week, but there was unforeseen and unavoidable delay in getting some important material needed in the improvements which prevented it. However, the furnace will be put to making iron in a few days.

Messrs. John S. Tilney and J. D. Probst of New York, president and director, respectively, of the Woodstock Iron Works, spent several days here the past week inspecting the properties of the company and conferring with local officials. They gave orders for the stocking up of the furnaces with ore and limestone to continue. It is learned that as soon as arrangements can be made for coke the company will put the furnaces in blast if they are not sold or leased in the meantime to some of the numerous parties now after them. It is thought to be very probable that the furnaces and magnificent brown-ore and limestone properties of the company will be sold or leased in the near future, as the present owners prefer giving their time and attention to other matters.

Henry F. De Bardeleben is making extensive preparations to develop the fine brown-ore properties recently purchased near Cane Spring. A contract has been let to J. D. Miller of Birmingham and O'Brien Bros. of this city for the grading of five miles of railroad from the Southern near Cane Spring out to his property, and for several spur tracks. He is also arranging to erect a number of large washers and 200 or 300 houses for miners and other employees.

The Central Foundry Co., which owns nearly all of the soil-pipe plants of the country, including a large one here, the capacity of which is to be doubled at once, has acquired an option on the furnace at Jenifer, twelve miles south of here, and magnificent iron-ore properties surrounding it. It is thought that the sale will be made. The furnace has just been changed from charcoal to coke and thoroughly overhauled and repaired.

The Winchester iron-ore property, near

Attalla, has been purchased by the Attalla Iron Ore Co. for \$40,000. The property is one of the best in the district, the percentage of metallic iron being very high. It will be worked to its full capacity, and contracts have been made for the entire output.

J. D. Lacey and associates of Chicago, who recently bought and began developing the Wilson's Ridge ore property, near Piedmont, have about closed a deal for the lands of the old Bluffton Company, which started to build a town some years ago thirty-five miles north of Anniston, but didn't. They will develop the brown-ore beds, which are very valuable.

The Alabama Iron Co., which recently bought the Langdon property, will have its washers in order and will begin mining and shipping ore about the first of November.

The Milesworth Mining Co. will also begin mining and shipping ore from its Ruck Run mines in about two weeks.

The Lagarde Lime & Stone Co. will put the third and last of its leased furnaces in the western portion of the city to making lime this week, making the daily output of the plant about 250 barrels. Work is progressing rapidly on the three immense furnaces of the company's new plant out at Lagarde, and they will be put in blast about November 15 with a capacity of 400 barrels of lime daily. The Lagarde Company is also erecting at Lagarde, where it owns a mountain of limestone, a huge limestone crusher of 800 tons daily capacity, and will furnish the crushed limestone to iron furnaces for fluxing purposes. The crusher will be ready for operation about December 1, and contracts have already been made for the product.

President Henry C. Weeden of the Hercules Iron & Supply Co., which recently purchased and put in operation the Hercules Soil Pipe Works, announces that in a few months he will enlarge his plant and add an extensive department for the manufacture of lead pipe and sheet lead.

T. Benton Dornan of Philadelphia, one of the owners of the Anniston Carpet Mill, arrived last Sunday, accompanied by Mr. Wm. H. Zinn, a progressive Annistonian, who was largely instrumental in having the mill established here, and spent several days in the city arranging to have the buildings and capacity of the plant doubled, which will be done at once. This carpet mill, which is the only one in the South, has only been in operation about four months, but is proving a great success in every way.

CAR SHORTAGE INCREASES.**Different Classes of Birmingham Shippers Feel It.**

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., October 17.

The market for iron the past week was devoid of any significance or interest. There were neither large orders nor large inquiries—just a fair, steady run of business. Buyers of medium and small-sized orders had the market, and the demand was mainly for nearby and first half of 1900 delivery. As delivery is a strong factor in the making of price, there was the usual variation in the market covering the same range heretofore reported. There is a slight accumulation of iron in furnace yards, owing to the fact that iron is held for cars to move it. The scarcity of cars, to which attention has been called, is increasing and interfering more and more with prompt shipments. Instances are cited where a whole week elapsed between the time an order was registered for cars and their delivery. The mining interests are placed at the same disadvantage, and operations have to be temporarily suspended. The cry of a car famine

is often heard now, and it comes from all classes of shippers. No better evidence of the activity of business in the district could be adduced.

The inquiry for steel has been very good, and indicates what may be expected when operations of the steel mill are commenced. There is no sign yet of any revival of the export trade. Some inquiries continue to come in, but there is no business in them. The warrant yards continue to show a decrease in stock. It has reached the lowest point in their history, and one need not be surprised if it reaches the point of denudation. The situation in coal grows more acute. Every available car that can be utilized is pressed into service, and orders are being constantly turned down or marked to be filled in their turn. There is no competition between conflicting interests for business, for each has offered business beyond capacity to supply. New mines have been opened and new slopes in old mines.

Dealers in machinery say they have never had such a trade, and their sales cover all lines—engines, boilers, pumps, compressors, ore and coal washers, etc. In some cases entire outfits were sold to one buyer. The Birmingham Machine & Foundry Co. has added an important branch to its business in announcing that it will hereafter make blowing engines. The concerns making them in this country are very few, and those engaged in the business have their capacity engaged for the next twelve to eighteen months. They can take no new business for delivery until after that time, while the Birmingham concern starts in with clean decks and can register orders for early delivery. These engines require in their building the highest order of skilled workmen and intelligent direction. The fact that this branch of difficult mechanism has been installed here will redound to the credit of the progressive spirit that is giving us world-wide fame.

A company composed mainly of local parties has been incorporated to buy the celebrated Blount Springs property and add to it a large sanitarium. The company will erect a new hotel, build elegant bathhouses and add such other inducements as circumstances suggest.

The daily press announces the location of the Dimmick Pipe Works at North Birmingham, while it is probable it lacks yet official confirmation. Our minor industries continue full of work. They are literally overrun, and the work keeps piling in on them.

The transfer of the control of the Williamson furnace to the lessees has been made, and the work of rehabilitation will commence at once. The influx of strangers has been so great of late that the hotels have been overrun, and all of them have been daily turning away offered guests. Rumor has it that a new company is in process of formation to build a fine hotel, but it cannot be confirmed at this writing.

J. M. K.

Eastern Iron Markets.

[Special Cor. Manufacturers' Record.]

Philadelphia, Pa., October 18.

Very little of special interest has occurred during the past week in the iron trade. There is a good deal of nervousness and anxiety as to how things are likely to go. It is matters occurring outside of the market rather than within that give our people most concern. A great many of the larger concerns have bought material for delivery during the first half of next year, and they are resting comparatively easy. The smaller concerns that are either unable or unwilling to take the chances of buying so far ahead are in a good deal of trouble, owing to the course prices are likely to take.

New Yorkers are endeavoring to dis-

count the future as far as possible. The present opinion that they entertain is that consumptive requirements are likely to increase steadily, and more capacity will be needed by the opening of spring. Where it is to come from is the question. They look for higher ore and dearer freights, and consequently dearer pig iron and finished iron and steel. What the outcome is they dare not predict, and will adapt themselves to circumstances as they arrive. Transactions in pig iron during the past week have been of rather insignificant proportion. There are large buyers here who would place orders if supplies could be promised at satisfactory terms, but agents and makers are holding to very high views. We had anticipated to receive large supplies from Alabama this winter, but Western customers have gotten in ahead of us, and we will be obliged to look elsewhere. Quotations today are about the same as last week, on paper, at least. Regarding finished material there is very little new to say beyond the fact that consumptive requirements appear to be on the increase among the smaller class of buyers. The larger concerns, such as car builders, bridge builders, locomotive builders, ship builders and the like have not placed many orders, although they are all ready and anxious to do so. They are awaiting developments, having placed sufficient contracts to furnish them with material for some time to come. The general impression is that we will soon enter upon a year of phenomenal activity, and that there will be a good many surprises in store for us. Capitalists are willing to invest money in shipyards, locomotive works, car works and in other iron and steel-using concerns, and a great deal of money will go that way during the next winter and spring.

The belief is entertained that we are entering upon an era of greater activity than the world has ever seen, and the opinion prevails that the iron trade is hardly ready for it yet. Our people think that the action of the Carnegie people to build new furnaces is a very wise one, and it is a policy which other concerns will have to adopt.

Bridge builders were in the market this week, or rather in the city sizing up the situation and going around among the offices. A large amount of bridge-building material will be wanted during the winter and spring. The heavy contracts have already been placed, but the requirements have not been covered by any means. Structural material will advance before thirty days, according to present indications. Steel rails will follow the same course and be quoted \$2 to \$3 higher, according to inside sources. This, however, is a rumor which cannot be verified. Circumstances point to the probability of dearer rails before long. Exporters have information from abroad of increasing requirements for American tools, machinery, equipments, etc. It is impossible to conscientiously report the iron market without taking an optimistic view of things, at least so far as demand is concerned. This, however, involves considerable trouble, as the supply of ore will be no more than equal, if equal, to the prospective requirements of next year.

The Iron and Metal Trades.

[Special to Manufacturers' Record.]

New York, N. Y., October 19.

In its weekly review of the iron and metal trades the Iron Age says:

"Conditions in the iron trade are becoming more and more puzzling. While assertions as to the adverse effect of high prices on consumption are growing more numerous, and there is more talk of resistance to further advances, the large interests are assuming an attitude of greater aggressiveness. The highly-inter-

esting movements in the vessel transportation on the lakes are complex, but find their explanation in the effort on the part of large consumers of ore to keep down lake rates, while the ship-owners are trying to establish a high figure in order to make it apply on old contracts. Charters for a heavy tonnage for the 1900 season have been made at \$1.10 and \$1.25, and discussions as to coming ore prices are being heard. A rise from the \$2.60 basis this year to \$5 and \$5.25 is spoken of. Apparently little has been done in furnace coke for the first half of 1900, but \$3 is mentioned, while a considerably lower figure is spoken of for the second half.

"Some large movements are reported in the intermediate materials in the Central West. In Bessemer pig there have been two sales, aggregating 80,000 tons. This does not include a 50,000-ton furnace contract in the Northwest.

"One block of 50,000 tons of billets was placed for delivery during the first half. There are very heavy billet inquiries in the market, one interest alone asking for over 100,000 tons. The attitude of the principal producers will probably be defined at an early date, and an important conference is talked of.

"In some of the finished lines very large requirements for 1900 are under consideration. Thus the largest consuming interest of merchant pipe is said to have placed a very large order, and is now in negotiation for the skelp for a part of it, the quantity of the latter figuring up to about 75,000 tons, the greater part of it steel.

"The announcement has been unofficially made that dating from Saturday, standard steel rails are to be advanced from \$33 to \$35 at mill by the makers for any orders entered after that date for 1899 or 1900 delivery. There is good reason to believe that this is the case. It is understood that some very good orders have again been placed lately, and that a large tonnage will be entered during the next few days. Report has it that the inquiries now on the market aggregate 250,000 tons.

"The wire interest has made a further advance of \$3 per net ton on wire and on nails, and reports are current that structural material is to be brought into line at an early date.

"It will be observed, therefore, all the great interests are committing themselves to a continuance of the rise, at least so far as the first half of next year is concerned. It would be idle to deny that the conservative element in the trade deplore this pronounced tendency, since it increases the danger of a check and threatens to make the inevitable decline, when it does come, more abrupt and demoralizing.

"The prospects of the export trade have been further darkened by the rise in ocean freights, due to the withdrawal of many vessels into the carrying of men and supplies for South Africa.

"In the metal trades the principal event is the weakening in lake copper and the easing off in tin."

Nearly forty orders for engines have been placed with the Richmond Locomotive and Machine Works since October 1, including twelve engines for the Canadian Pacific Railway Co., according to a dispatch from Richmond.

Up to October 4 the building permits issued this year at Atlanta numbered 1639, representing \$871,294, or \$268,000 more than the 1411 permits issued during the same period last year.

Chief Constructor Hichborn of the United States Navy in his annual report points out the necessity for a dry-dock of a larger size at Norfolk, Va.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Central of Georgia Meeting.

The annual meeting of the Central of Georgia Railway Co., held at Savannah, showed that under the present administration the system is in a prosperous condition. The gross earnings amounted to \$5,767,000, and the net earnings to \$1,801,000. Including rentals and other revenue, this is swelled to a total income of \$2,016,000. After deducting charges of all kinds, a surplus is left of \$59,000. During the year the company purchased a controlling interest in the Wrightsville & Tennille Railroad by securing 4162 shares of its stock. About 5000 tons of heavier rail was used for relaying various portions of the line, making a total of nearly 11,000 tons laid during the last two years. Other improvements included the laying of over 600,000 cross-ties, the reballasting of about sixteen miles of track, in addition to building a number of new depots and the reconstruction of several bridges. The present officers were re-elected. Mr. H. M. Comer is president, and John M. Egan, vice-president, of the company.

A North Carolina Project.

The plan to extend the Moore County & Western Railroad to Concord, N. C., where it will reach a branch of the Southern system, has been taken up by Messrs. A. C. Wilcox & Co., Drexel Building, Philadelphia, who inform the Manufacturers' Record that they are arranging to float a bond issue at the rate of \$15,000 a mile to finance the undertaking. At present the line extends from Aberdeen to a point seventy miles from Concord. It was originally built to reach extensive timber tracts in the vicinity of Aberdeen, and has been one of the best paying short lines in the South. With the extension proposed completed it will traverse a very productive portion of North Carolina and give the town of Concord a connection with the Seaboard Air Line, which it reaches at Aberdeen.

Increase in Earnings.

The earnings of the principal lines in the country for September, also for the last nine months, make a very creditable showing in favor of the Southern and Southwestern States. For the month of September the earnings of the Southern group increased 13.6 per cent., and the Southwestern 12.2 per cent. These figures are equalled only by two other sections of the country. For the first nine months of the year the earnings of the Southern group amounted to 8.7 per cent., which was also equalled by but two other portions. One of the groups making the most favorable report was that of the coal-carrying railroads, on which traffic was unusually heavy, owing to several extraordinary reasons.

To Prevent Ticket Forgeries.

The efforts made by the various railroad companies of the country to prevent the numerous forgeries of tickets of late have resulted in the invention of a special seal, with an embossed design, which has been copyrighted. It is so well protected that anyone who attempts to utilize it illegally will be liable to criminal prosecution through United States courts. It is believed that the severe punishment which the government metes out to counterfeiters will have a good effect in preventing further attempts to produce bogus passenger tickets.

May Buy the Northeastern.

A dispatch from Atlanta, Ga., is to the effect that the Chattanooga, Augusta & Charleston Air Line Railroad Co., recently incorporated, will not only construct a line connecting the Seaboard Air Line with Augusta, but will also purchase the Northeastern Railroad of Georgia, which is to be offered for sale in the near future by the State. This acquisition would be an important portion of the proposed line between Chattanooga and Augusta, which is to connect with the Seaboard Air Line at a point near Athens or Elberton, Ga.

Tifton, Thomasville & Gulf.

In a letter to the Manufacturers' Record H. M. Atkinson of the Union Lumber Co. of Atlanta, Ga., writes that the Tifton, Thomasville & Gulf Railroad is being constructed by this company and is nearly completed to Moultrie. The question of extending it to Tallahassee from Thomasville, Ga., is under consideration, but no decision has been reached as yet.

Railroad Notes.

The American Car & Foundry Co. at Huntington, W. Va., recently received an order for 800 box cars from the Norfolk & Western Railway Co.

Recent orders received by the Richmond Locomotive Works of Richmond, Va., include twenty freight engines for the Atchison, Topeka & Santa Fe Railroad and four switching engines for the Chicago & Western Indiana Company.

The Memphis & Chattanooga Railway Co., formed to build a line between Stevenson, Ala., and Chattanooga, thirty-eight miles, has organized by electing H. S. Chamberlain, president, and G. W. Ochs, secretary. As already stated in the Manufacturers' Record, the road will be a branch of the Southern system.

At the meeting of the Newport News & Old Point Electric Company, William J. Payne of Richmond was elected president, and the following officers: Vice-president, Mr. L. P. Stearnes; treasurer, Mr. H. L. Schmelz; secretary, Mr. D. C. Zollicoffer. President Payne announces that this company has secured ten cars for winter service, which will be placed on the line in a few weeks. The system in Newport News is being completed as rapidly as possible.

Along the Atlantic Coast.

The completion of the Dismal Swamp canal, recently referred to in the Manufacturers' Record, it is believed will open up an additional market for the products of Eastern North Carolina as far north as New England. It is understood that the question of operating barge lines directly from the Albemarle and Pamlico sounds to Philadelphia, New York and other Northern cities has been agitated. As vessels drawing ten feet of water can pass through the locks along the canal, comparatively large boats can be loaded for the points mentioned. It is believed that the government will soon take up the question of completing an inland passage from the Carolina sounds to Charleston, S. C., for strategic purposes, as well as to stimulate commerce, for at Charleston a water route inside the coast line is now available as far as Jacksonville, Fla., which will soon be extended to Key West through the work of the Florida Coast Line Canal Co., which is completing a waterway embracing 560 miles of river, lake and canal.

The taxable basis of Houston, Texas, for 1899 is \$25,750,994, an increase of \$3,222,891 over 1898.

COMMERCE.

This department is devoted to a record of the rapidly developing commerce of Southern ports.

More Ships Chartered.

In addition to the steamships plying between Southern ports and Europe which have been chartered by the British government for transport service, the announcement is made that negotiations are under way for several of the fleet of the Chesapeake & Ohio Steamship Co., and that already the Rapidan has been secured. This is one of the largest in service between ports on Hampton Roads and Great Britain. It will be utilized to carry troops to South Africa.

To Buy Rolling Stock.

A Japanese street-railway official has been visiting St. Louis and other points in the West and Southwest with the view of purchasing rolling stock for a railroad which will be twenty miles in length. On the line about thirty bridges will be constructed, one over 6000 feet long. The official in question expects to purchase the necessary rolling stock, as well as rails and bridge material, while in the United States.

Machinery for Chili.

Messrs. Spencer & Waters of Santiago, Chili, in a letter to the Manufacturers' Record write: "We are thankful to receive any and all information concerning American manufacturers, and more especially in the machinery line. We have already introduced a considerable quantity of American machinery into this country, and the trade is increasing."

Coal Trade With Mexico.

The Mexican & Northern Steamship Co. is a recent incorporation in West Virginia, capitalized at \$500,000. It is announced that the company will engage in the coal and coke trade between Baltimore and Tampico, Mexico, and that it has chartered three steamships for this service. Willis J. Best is president of the company.

Jottings at the Ports.

The imports of coffee at Galveston, Texas, continue in large quantities. The steamship Herschel recently brought 8000 bags from Santos to the port mentioned.

A stock company has been organized at Corpus Christi, Texas, to operate a steamboat line between Corpus Christi and Galveston, Texas. It is capitalized at \$20,000, and includes G. R. Scott and C. C. Heath.

The Merchants & Miners' Transportation Co. of Baltimore has secured the steamship New Orleans, which has been engaged in service between New York and New Orleans in the fleet of the Cromwell Line. The New Orleans is about 1600 tons register, and will be utilized between Baltimore and Savannah.

The channel connecting with the Galveston harbor is now of such a depth that vessels drawing twenty-five feet of water can load without danger of grounding. The steamship Masconomo recently cleared for Hamburg drawing twenty-five feet, and the Alabama loaded for Copenhagen drawing about twenty-four feet three inches. In addition to cotton, both vessels carried a miscellaneous cargo, including grain and cottonseed products.

Although the fire which destroyed a large area of the Southern Railway Co.'s terminals at Norfolk occurred less than a month ago, one wharf 800 feet long and

300 feet wide has already been rebuilt, and it is calculated that the warehouses will be replaced by the 15th of next month. The company immediately placed a large force of men at work restoring the burned buildings and piers, and the plans were completed before the fire had been entirely extinguished.

WILL USE ELECTRICITY.

Mills at Fayetteville To Be Operated by Cape Fear Power.

[Special Cor. Manufacturers' Record.]

Fayetteville, N. C., October 16.

Mr. W. M. Morgan, president, and Mr. Percy Gray, secretary, of the Cape Fear Power Co., are making arrangements to transmit electric-power to this place in the spring from their plant, twenty-five miles away. The various mills and industries located here agreed to take 2000 horse-power from this source. An understanding was also had with our town authorities to light our city on very favorable terms with arc and incandescent lights.

There have been built here recently several large cotton mills and a silk mill. These were equipped with the latest improved steam-powers, but owing to the wonderful advantages electricity possesses over either water or steam, these new steam fittings are to be virtually discarded and electrical power substituted. This will be furnished at only \$15 per horse-power per year. A fair estimate of the cost of steam-power is anywhere from \$18 to \$25 per horse-power in this section. While only about 2000 horse-power seems to be necessary here at present, it is safe to predict that within a very short time over double this amount will be employed here. Ample precautions have been taken by the Cape Fear Power Co. to prevent interceptions by floods, and the storage or lake system will be adopted to provide for any period of low water. This latter will be of advantage to the navigation of our river, giving us water when it will be most needed by our boats. The advantage to Fayetteville of this new enterprise cannot be overestimated. This, added to our other attractions, will soon bring our city to the front rank of prosperous, up-to-date places. Our water transportation gives us a great advantage in the matter of freight rates. A new railroad is heading for this place from attractive Southern Pines. They will open up to a connection with another great railway system, the Seaboard Air Line. Eight miles are already graded and partly crosstied. Fayetteville will one day be a great railroad center.

The Holt-Morgan Mill is constantly installing additional looms. This will soon be one of the best-equipped mills in the South. The Holt-Tolar Mills is about completed and ready for its equipment of modern machinery.

The Hope Mills Co. is pushing the improvements and additions to its recent purchase, the Bear Creek and Bluff Mill. The air-moistening system, sprinkling, steam heating and electric lighting and new looms and other machinery will be added at once.

The satisfactory price of cotton and lumber, the new tobacco interest, the boom in milling—all these combine to give this section and town renewed life. Let the good work go on.

Fayetteville will give a warm welcome to capital seeking profitable investment among us. The new silk mill has started to work. The company contemplates building another mill here very soon. Vice-President Hobart and John Wannamaker are said to be stockholders in this mill.

F. R. ROSE.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

THE COTTON OUTLOOK.

Review of the Situation by Messrs. Latham, Alexander & Co.

The twenty-sixth annual edition of "Cotton Movements and Fluctuations" of Messrs. Latham, Alexander & Co. of New York has just appeared. It contains, in addition to its accurate statistics of the acreage, crop, consumption, exports, prices of cotton for a long period of years, a special article by Mr. Thomas Ellison of Liverpool reviewing the cotton trade throughout the world last year. In their review of the situation Messrs. Latham, Alexander & Co. look for a consumption of American cotton during the coming year largely in excess of the consumption last year. They note with pleasure the vigorous growth of the cotton-mill industry in the very heart of the cotton-growing region, and say: "The industry primarily belongs there by all the right and advantages of natural laws, and we are pleased at the evident appreciation in the South of her incomparable privilege and inherent advantage."

They are not prepared to forecast with anything like certainty the final outcome of the new crop, though they are persuaded that it will be materially smaller than that of last year. This belief is based upon innumerable reports of damage, especially in Texas, of the greatly-reduced amount of fertilizer used, the bad condition of large areas of land when planting was begun, and an actual decrease of the acreage by at least 10 per cent. In conclusion they say:

"A year ago we were just emerging from a foreign war, which, though short, and while the result was never in doubt, was at least a disturbance of that peace so devoutly to be desired between all the nations of the earth. The costs of that war were great, but because of the ready patriotism of the people and the magnificent resources of the country our national treasury has felt no strain, and our national credit is absolutely undisturbed. The termination of the war with Spain seemed a signal for the revival of our industrial activity and commercial prosperity. There is not a single trade interest or business enterprise in the United States that has not experienced vital improvement during the last twelve months. There is not a cloud of doubt or discouragement on the horizon. It would seem that, as a nation, we will be able to balance all accounts with the closing century and carry vast credits to surplus accounts with which to begin 1900."

Round-Bale Cotton in Montgomery.

Very few citizens are aware that Montgomery has a round-lap-bale cotton press. There being so much interest manifested in this new process, an Advertiser reporter on yesterday visited the Alabama Cotton Oil Co., where the new press is in operation.

It was astonishing to note the vast improvement over the old square-bale process. To see the cotton taken direct from the wagon and in a few minutes made into a handsome cylindrical package, thirty-five inches long and twenty-two inches in diameter, already compressed, is

a sight worth seeing. The press, which not only presses but compresses as well, is a complicated piece of machinery, very massive and costly. The cotton, after it is ginned, is drawn by suction power into the press; it then comes out in a roll, which runs between two monster iron rollers and wraps itself around a spool between the two large rollers. When the roll assumes the size of an ordinary roll of carpet the machinery is stopped and the roll of cotton is detached from the press. The canvas cover is then placed on the rollers and after two or three turns the bale is ready for shipment. The amazing feature of the whole affair is the remarkably quick time in which it is done. The cotton is taken from the wagon, ginned, pressed, compressed and baled within ten minutes.

The round-lap bale is far more remunerative to the farmer than the square bale, as it commands a better price. It can be put up cheaper, handled cheaper, there is no compress fee, transportation charges are less, etc., hence the buyer can pay a higher price for it. It is claimed that the farmer can get a sufficient premium for round-bale cotton right here in Montgomery to pay all the charges of ginning and wrappings, and have several "bits" over on every bale.—Montgomery (Ala.) Advertiser.

Columbia's Sixth Mill.

Messrs. W. B. Smith Whaley & Co. of Columbia, S. C., have about completed plans and specifications for the new cotton factory recently reported as to be established with 6000 spindles and 200 looms as its equipment. The title of Capital City Cotton Mill has been chosen for the enterprise, but no charter will be applied for until it is completed and ready for operation. The main building will be a two-story structure, 217x76 feet, each story sixteen feet high. The output will be three-yard export sheeting, about 4000 pounds daily. About \$100,000 will be invested in the plant.

Cotton Movement.

The movement of cotton into sight declined last week. According to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, for October 13, the amount of cotton brought into sight was 1,851,547 bales, a decrease of 34,817 bales from the same period last season. Exports were 772,386 bales, an increase of 111,441; takings by Northern spinners were 219,331 bales, an increase of 43,186, placing the Northern spinners in the lead as takers; by Southern spinners 188,726 bales, an increase of 18,633 bales.

New Mill at Greenville, S. C.

Charter has been applied for by the Quintin Mills of Greenville, S. C., the incorporators being Messrs. J. Hamlin Beattie, Frank Hammond, G. A. Norwood, W. J. Thackston and J. I. Westervelt, and the capital stock being placed at \$300,000. The required capital is about secured, and work of erecting the plant will commence soon. The equipment is to be 12,000 spindles and 300 looms. This is the enterprise recently reported as being promoted by Mr. Westervelt.

Round Bale at Galveston.

According to a dispatch from Galveston, Texas, the round cotton bale is becoming much in evidence on the wharves there. One morning last week there were several barges of the Direct Navigation Co. distributing their cargoes, which consisted of cotton put up in this manner. The steamship Chancellor, which sailed for Liverpool on Friday, carried 47,097 round bales, which is the largest number so far

carried by any ship this season from the port.

Textile Notes.

A movement is on foot at Gloster, Miss., for the formation of a cotton-factory company.

The Davis-Crews Knitting Mills has been organized to establish plant at Kernersville, N. C.

The Huntsville (Ala.) Cotton Mills will enlarge and improve their plant. The erection of an addition will be commenced at once, 50x150 feet in size.

The Natchez (Miss.) Cotton Mills will purchase and operate another cotton mill. The proposed acquisition is now idle, but it will be improved and operated.

The Williamson County Farmers' Institute of Taylor, Texas, will endeavor to locate a cotton factory of \$75,000 capital. J. H. Faubion, president, is interested.

Mr. W. H. Cook of 345 Carondelet street, New Orleans, La., is interested in a project for the establishment of a \$500,000 cotton factory, and manufacturers of machinery may find it of advantage to correspond with him.

Efforts are being made at Newnan, Ga., for the organization of a \$250,000 cotton-factory company. Among those interested are Messrs. R. D. Cole, Sr., M. F. Cole, R. D. Cole, H. C. Arnold, J. A. Hunter and J. H. Hardaway.

The Young Men's Business League of Cameron, Texas, is furthering a movement for the organization of a cotton-mill company to have capital of \$100,000. Those interested are Messrs. J. C. Reese, Jaul Keith, D. Kemp and W. T. Hefley.

The Raleigh (N. C.) Cotton Mills will put on a night force of operatives and operate day and night. The ever-increasing demand for the company's yarns makes this increased capacity necessary. About 150 men and women are employed. The spindles number 10,800.

Boston cotton-mill parties have purchased the Tugalo Rapids water-power, near Hartwell, Ga., for the purpose of developing same and erecting a cotton factory. Messrs. E. B. Benson and J. D. Matheson were the owners of the property. Further particulars regarding this project will be given later.

The amount of \$60,000 has been subscribed for the proposed cotton-factory company at Hickory, N. C., recently reported as projected by Mr. A. A. Shuford. The capital may be increased to \$75,000. Order for machinery will be placed about January first, and the plant is to be ready for operation in the early spring.

The stockholders of the Dallas Manufacturing Co. of Huntsville, Ala., will hold a meeting next month, at which consideration will be given to doubling the plant. Such doubling would consist of the erection of a 25,000-spindle and 750-loom mill, and would cost about \$500,000. Probably a bleachery will be established also if it is decided to build the new factory.

Mr. Robert L. Steele of Rockingham, N. C., proposes the establishment of an extensive bleachery and dyeing plant, and will doubtless form a company in the near future to build and operate it. The location has not been chosen as yet, although several towns have made propositions to secure the enterprise. Doubtless the most liberal proposition in the way of advantages, exemption, etc., will be accepted.

The Raleigh (N. C.) Chamber of Commerce has re-elected Wesley N. Jones, president; Josephus Daniels, J. E. Pogue and Jesse A. Jones, vice-presidents; Geo. Allen, secretary, and Frank T. Ward, treasurer.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, N. Y., October 18.

The cotton-oil market presents no specially new feature. Seed prices have gone up slightly, and with this advance crushers' views are correspondingly heightened with regard to oil. A feature of this year's seed consists in its being less productive of oil than that of last year, but the quality of this year's oil is generally admitted to be superior. The market is developing more steadiness, and with reliable returns of the volume of seed supplies available for the present crushing season operations on an extended scale may be expected. In the meantime there is very little on offer, although enquiries, both for domestic and foreign consumption, are increasing and becoming more urgent. The lard market is quiet, and scarcely as strong as a week ago, December lard, Chicago, being quoted at 5.32½ cents, and for January 5.45 cents. Tallow prices are fairly steady, New York city makes in hogsheads being quoted at 5½ to 5¾ cents. Grease of all kinds is well maintained with regard to prices. Foreign markets are firmer and a little higher, but still below a working basis. The situation all around must be conceded to be satisfactory, being much more favorable from producers' standpoint than for a number of years. For prime summer yellow 31 to 32 cents is asked, with no disposition to sell under these figures. Off grade is on offer in limited quantities at 28 to 29 cents. White it quoted at 33 to 34 cents. As illustrative of the trend of the market, a week ago 30 cents was an inside rate for prime yellow, which today cannot be touched under 32 cents. The chief obstacle to a steady market with regard to prices and normal trading consists in the uncertainty of the planters' views in the disposition of seed. Western refiners are taking the situation more seriously than those of the East, inasmuch as they recognize that higher oil prices have come to stay, and are figuring upon purchasing accordingly. There is a strong belief that lard will be marked up materially during the next few weeks, a condition of affairs which will place cotton oil on a higher plane, as it must be conceded that the present range of cotton-oil prices are relatively lower when considered in connection with other greases. No change in the situation with regard to the cake and meal market. Prime meal is nominally quoted here at \$19 to \$20, while linseed-oil meal is selling at \$27 per ton, a disparity in prices not warranted by conditions. Refined oil in England is strong at \$18.

Cottonseed-Oil Notes.

The price of cottonseed at Paris, Texas, on the 9th inst. advanced from \$9 to \$11 per ton on the local market.

The Danish steamer Headlands was loading at New Orleans on the 13th inst. with cottonseed oil for Copenhagen.

At Wortham, Texas, cottonseed buyers paid \$14.50 per ton for seed on the 10th inst. On account of the high prices ruling, receipts of seed were very heavy last week.

The Arcola Manufacturing Co. has about completed its cottonseed-oil mill at Arcola, Miss. The plant is fitted up with the most modern machinery, and has a capacity of sixty tons per day.

The steamer Masconomo cleared last week from Galveston, Texas, for Ham-

burg with 13,026 sacks of cottonseed meal, 295 bales of cotton linters and other cargo, and the steamer Alabama for Copenhagen with 1265 barrels of cottonseed oil, 18,449 sacks of cottonseed cake and other cargo.

The Memphis Commercial-Appeal quotes the market for cottonseed products as follows: Prime crude oil, 24 to 25 cents; off crude, nominal; prime summer yellow, 27 to 29 cents; off summer yellow, nominal; cooking summer yellow, 30 to 32 cents; cottonseed in bulk, \$10 per ton by rail or wagon; sacked seed by river, \$11 delivered at Memphis; prime cottonseed meal in car lots, \$17 to \$18 per ton.

In the Texas market for cottonseed products the price for oil has again advanced, and values have reached the highest point since 1892. The present output of oil is well sold up, and stocks will be very light for the next thirty days. Prime crude oil is offered at 25 and 25½ cents, and finds ready buyers at the outside figure, while prime yellow oil is firm at 27 to 28 cents per gallon. The same period last year prime crude was offered at 12 to 12½ cents, and prime yellow at 15 to 15½ cents. Meal and cake are worth \$20.50 to \$20.75 per ton, and last year sold at \$13 to \$13.50 per ton. It is stated that with the short crop of seed and under a foreign demand, which will shortly be present in the Texas market, prices will likely advance sharply during the winter months. Lint is selling at 2¼ to 3 cents per pound, and hulls at \$6.50 to \$7 per ton. Houston mills paid on the 11th inst. \$11 per ton for seed, but was quoted later at \$9 to \$10 per ton, and higher at several other points in the State.

Chance for Sugar Refiners.

A correspondent of the Manufacturers' Record at Wharton, Texas, writes that the Caney valley is to be developed by the construction of two railway lines, one of which will be a branch of the Southern Pacific, and the Cane Belt. The territory affected is about 100 miles in length, and ranges from three to five miles in width. It is one of the most extensive cotton-producing sections of the South, but it is believed that the construction of the railway lines will be an impetus to grow sugar-cane, to which the land is especially adapted. According to the correspondent, an excellent opportunity is offered to construct sugar mills in this part of the State. The C. W. Jones Grocer Co. at Wharton will reply to any communications from prospectors.

A chamber of commerce has been organized at Charlotte, N. C., and a committee to develop fully every existing commercial, industrial and mechanical interest of the community, and to encourage anyone who offers investment for home capital, to induce outside capital to seek investment there, to furnish statistical information regarding all pursuits in the community and for other purposes.

The shipments of lumber and timber from Athens are now the heaviest of the season. The business in wood products is attaining such proportions that the Louisville & Nashville Railroad has added another half-mile switch to its already extensive yards at that place.

It is stated that E. E. Barthell of Nashville, Tenn., has about completed arrangements for a big timber deal in Scott and Fentress counties. He has secured large tracts of white oak and white pine in these counties to the value of \$47,000 for Thos. H. Lyon of Chicago.

The steamer St. Kilda cleared last week from Savannah, Ga., with 1654 tons of high-grade Florida phosphate rock and other cargo.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record, Baltimore, Md., October 19.

The movement in phosphate rock during the week has been moderate, as with other fertilizer ingredients. There has been some demand for Tennessee rock, and several purchases of South Carolina and Florida rock are reported. The situation at all points in the Southern phosphate belt is very satisfactory as to prices, which are generally very steady. In South Carolina miners are working successfully, and there is a good foreign and domestic demand for all the output. Since September 1 over 9000 tons of phosphate have been shipped from Charleston to domestic ports, against 6150 tons for the same period last year. Crude rock is held at \$4.25 to \$4.50, and dried \$4.75 to \$5 per ton f. o. b. Ashley river. Florida miners have their output well sold up into next year at good prices, and at the moment the foreign demand is urgent. The work of development is progressing rapidly, a number of new deposits having been opened up and large sales of rich phosphate territory reported. The mines in Tennessee are being worked more systematically, and the output every month shows a material increase. During the present month over 10,000 tons of Tennessee phosphate rock have been shipped from Pensacola, Fla., to European ports. Prices at Mt. Pleasant continue steady. The following charters were reported last week: Schooner Mary Lee Patten, 522 tons, from Ashley river to Baltimore with phosphate rock at \$2.50; schooner Melissa Trask, 225 tons, from New York to Savannah with phosphate at \$1, and British steamer Harlyn, 929 tons, from Tampa to Certe with phosphate rock at 21/6, prompt.

Fertilizer Ingredients.

Transactions in leading ammoniates during the past week have been of moderate volume. In the West offerings are moderate, and stocks about normal. The apparent decline shown in the quotations below is due to the disposition of sellers to meet the recent advance in freight rates. Sulphate of ammonia is firm. Nitrate of soda has been selling freely, and the offerings are light. Cable advices from Chili this week stated that the export of nitrate from that country this year will exceed 30,000,000 quintals.

The following table represents the prices current at this date:

Sulphate of ammonia (gas).	\$3 00 @ 3 10
Nitrate of soda.....	1 70 @ 1 72½
Blood	1 90 @ 1 92½
Hoof meal.....	1 67½ @ 1 70
Azotine (beef).....	1 90 @ 1 95
Azotine (pork).....	1 90 @ 1 95
Tankage (concentrated).....	1 65 @ 1 67½
Tankage (9 and 20).....	1 72½ @ 1 75 & 10
Tankage (7 and 30).....	17 00 @ 17 50
Fish (dry).....	20 00 @ —
Fish (acid).....	12 00 @ —

Phosphate and Fertilizer Notes.

The British steamer Juanita cleared from Savannah, Ga., last week for Bremen with 2209 tons of Florida phosphate rock, valued at \$22,090—cargo various.

The steamship Clinton cleared last week from Pensacola, Fla., for Genoa with 3500 tons of Tennessee phosphate rock and other cargo. The total shipments of phosphate rock for the week ending the 14th inst. aggregated 3907 tons for European ports.

It is stated that some very rich deposits of phosphate rock have been discovered at Awalt, about eight miles from Tullahoma. Leases and options have been obtained on all the land within a radius of several miles of Awalt, and prices of real estate have advanced to fabulous figures.

The domestic shipments of phosphate rock from Charleston, S. C., for the week ending the 14th inst. aggregated 3927 tons, distributed as follows: Perryville, 640 tons; Baltimore, 664 tons; Weymouth, 2623 tons. The total shipments from September 1 amounted to 8739 tons, against 6153 tons for the corresponding period last year.

It is rumored that efforts are being made to combine all the principal phosphate-mining companies around Columbia, Tenn., into one big concern. The money consideration necessary to accomplish the purpose will amount to \$7,000,000 or \$8,000,000. The scheme carries with it the building of a railroad through the middle of all high-grade phosphate fields.

It is stated that the Virginia-Carolina Chemical Co. has practically closed a deal for the purchase of the Edisto Phosphate Co. at Charleston, S. C. It is understood that the stock of the company will be taken at its par value, a total of \$200,000 being paid for it. The plant of the company will be acquired with the stock. The manufactured product and other stock on hand will be transferred to the Virginia-Carolina Company at cost price. The stockholders of the Edisto Company will meet on the 24th inst. to confirm the sale.

The following steamers cleared from the port of Fernandina during the month of September with phosphate cargoes for European ports: Nor for Memel, 2850 tons; Lyell for Rendsberg, 3100 tons; Romala for Rotterdam, 3000 tons; Glenochile for Rotterdam, 2400 tons; King Arthur for Ghent, 1350 tons; Perreth for Hamburg, 3150 tons, and Glengail for Stettin, 2500 tons; total, 18,300 tons; previously reported, 182,343 tons, making a grand total for nine months ending September 30 of 200,643 tons. The following steamers have been chartered for October: The Heathmore, Norland, Bassuta, Berkshire, Bana and Benbow, and the estimated shipments for the month will reach 20,000 tons. The steamer Bassuta arrived in port last week to load a phosphate cargo, and the steamer Norland cleared last week with 3100 tons of phosphate rock for Stettin.

The Commercial Chemical Co. of Baltimore, recently organized to take over the acid works of Slingluff & Co., is said upon good authority to be controlled by the Thomsen Chemical Co. of this city, and it is reported that, in conjunction with others, extensive additions will be made to manufacture by modern methods a full line of sulphuric and other acids from brimstone and American pyrites. Mr. Angus Cameron of the Thomsen Chemical Co., when questioned on the subject, while admitting intimate connection, had nothing to disclose relative to his plan of development. He, however, stated that his company's business in the manufacture of commercial chemicals was rapidly developing, chiefly due to the reliable test and high uniform grade of chemicals produced, which in every instance are superior to the imported, and as Baltimore is the gateway to the South, and has many advantages in shipping by water and rail, and close proximity to mineral beds, we hope to furnish the requirements of consumers of chemicals in that territory. To do this it is obvious we must keep pace with the times, and that we will endeavor to do. It would be a matter of much benefit, not alone locally, but as affecting the best interests of manufacturing establishments in the South using acids and chemicals, if the largest works of this kind in the Central States were located here. Mr. Cameron is the man to accomplish this if he will, and we hope that he may so decide.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.**Baltimore.**

Office Manufacturers' Record,
Baltimore, Md., October 19.

The volume of business in the local lumber market continues to show fair proportions, and the general tone of the market is very steady as to values. Receipts continue fair, but in certain lines stocks are very low on account of scarcity at points of production. In hardwoods trade continues very satisfactory, and the demand from nearby towns is brisk. Dealers find it difficult in many cases to fill orders promptly, stocks being light, especially in dry stock. In a letter to the Manufacturers' Record from the Bowman Lumber Co. of St. Albans, W. Va., the superintendent says: "As to manufactured lumber, the mills are shipping close up to the saw, with no accumulation of stock. The river mills are mostly sawed out, and by the 1st of January, 1900, there will be a lumber scarcity in this section such as has not been seen for years." Hardwood exporters during the week in a local way have not been doing a heavy trade. The advance in ocean freight rates has been sudden and the European market is not yet prepared to purchase largely. From late advices, however, there is a good inquiry for hardwoods, and later on no doubt considerable business will be done at the advance in hardwoods in this market. Receipts of North Carolina pine are being freely absorbed in the Baltimore market, and values for both air-dried and kiln-dried lumber are firm, with a tendency to still higher figures. White pine is in fair demand, with values steady.

Norfolk.

[From our own Correspondent.]
Norfolk, Va., October 16.

The situation in this section in North Carolina pine remains unchanged, and the demand today is quite as pronounced as it was six months ago; in fact, in every line of the local lumber market here there is a full volume of business reported. Mills at this point are rushed with orders, and Northern buyers are taking lumber as fast as it can be shipped. At all milling sections throughout the North Carolina pine belt the same conditions exist, and the indications are that there will be a rush of trade until the first of the new year. Prices are likely to be again advanced when the association meets on the 19th inst., and on the better grades higher values are likely to rule in future. Dressed lumber has been selling in large lots during the past week, and values continue firm, with a higher tendency. Planing mills have all the orders they want, and are running overtime in many cases. The reopening of the Dismal Swamp canal was celebrated last week by a party of Baltimore and Norfolk capitalists, who made the trip through the canal, arriving at Elizabeth City, N. C., where a reception and banquet was held. The event is one of great importance to this city, and also to a large section of Eastern North Carolina. The opening of the canal will also have a good effect upon the lumber trade generally, changing the features of business in some respects. The activity at the moment in the general business of this port is quite marked, and the wharves and docks present a busy appearance. Shipments of lumber by water are very heavy, while rates are firm and advancing. During the past week the following charters were reported: Schooner Ida Schoolcraft, 304 tons, from Norfolk to New York with lumber at \$2.75; schooner

Helen Hasbrouck, 310 tons, from Suffolk to New York with lumber at \$2.75; schooner Ida B. Gibson, 224 tons, from Norfolk to Bridgeport with lumber at \$2.75, and schooner Maria Pierson, 272 tons, from Richmond, Va., to Elizabethport with oak lumber at \$4.25.

Savannah.

[From our own Correspondent.]
Savannah, Ga., October 16.

In local lumber circles during the past week transactions have been larger than usual, and the volume of business is showing a material increase in every avenue of the lumber trade in Southern Georgia. Never before in the history of the lumber industry of this section have the general conditions of the market been as satisfactory, and lumbermen are now enjoying a fair margin of profit. As to the demand for lumber, it is now coming from various sources; from railroads large bills are being filed for betterments; car shops are buying freely; the building trade is adding largely to their supplies, and both the domestic and foreign demand is in a healthy condition. At interior towns in this State the most favorable conditions are reported, and the market everywhere has taken on new life in most directions. From the nearby port of Brunswick the business of the present year in wood products bids fair to rival in volume that of any previous year in the history of the lumber trade. The improvement in the Ocmulgee river will contribute largely to the volume of business in lumber and timber. With this river navigable at all seasons the opening up of the hardwood timber belt will be one of the many favorable features resulting from river improvement. The saw-mill sections in and around Brunswick are all characterized by activity in trade, and mills are running at their full capacity in order to keep up with contracts. During the past week shipments at Savannah have been quite liberal to Northern and Eastern points, over 5,000,000 feet having left the port. The situation in freights is unchanged, rates being firm, with a better offering of tonnage. Among the charters for the week are the following: Schooner Ed P. Avery, 482 tons, Savannah to New York or Rondout with lumber at \$6.87½ and towage; schooner Viola Rippard, 387 tons, from Savannah to New York with lumber at \$6.75; schooner D. Howard Spear from Darien to Bath with lumber at \$7, and schooner F. C. Pendleton, 388 tons, from Savannah to a Sound port with lumber at \$7.37½, 40 M a day.

Mobile.

[From our own Correspondent.]
Mobile, Ala., October 16.

The timber market here has again scored an advance, and the volume of business is considerably restricted for want of stock. Sawed timber is quoted ½c. per cubic foot higher, and quotations ruling are 13½ to 14 cents per cubic foot, 40-foot basis. Cypress logs are also higher, having advanced 2 cents per cubic foot during the past week. There is a good demand for cypress logs at 8 to 12 cents per cubic foot. Hewn timber is in good demand at 14 to 14½ cents per cubic foot, basis of 100 cubic feet, average B1 good. Hewn poplar is in fair demand at 12 cents per cubic foot. The movement of lumber at this and adjacent points is active in every line of the industry, and mills are all rushed with orders. The demand now is from Central and South America, Mexico, Cuba and Great Britain and Continental ports. The list of values continues firm, with a higher tendency, buyers being anxious to get the lumber, while they pay prices without hesitation. During the past week the shipments amounted to 1,348,421 feet to Central and South America, Great Brit-

ain and Cuba. Of this amount, Central America took 202,106 feet, Liverpool 128,170 feet, Havana 503,904 feet and Rosario, A. R., 514,241 feet. The total exports of lumber since September 1 aggregate 7,155,421 feet, against 1,826,367 feet for the same period last year. The steamship Dalmalley cleared for Liverpool with 35,613 cubic feet of sawn timber, besides 135,000 feet of lumber. The effect of the withdrawal of British vessels from the Atlantic trade to act as transports, supply ships, etc., for the British government in the Transvaal war has already had the effect of advancing ocean freight rates. Rates for coastwise tonnage are very strong at former figures. Among the charters reported for the week are the following: British schooner A. A. McIntyre from Pensacola to two ports St. Croix with lumber at \$9; Russian bark Hilja, 649 tons, from Pensacola to Rosario, A. R., with lumber at \$14; schooner Carrie A. Bucknam from Pascagoula to Point-a-Pitre with lumber at \$9, and British brig Ora, 198 tons, from Pascagoula to St. Pierre, Martinique, with lumber at \$10.

Lumber Notes.

A sash, door and blind factory is about to be established at Waycross, Ga. It is to be in operation by the opening of the new year.

Receipts of lumber at New Orleans for the week ending the 13th inst. amounted to 2,077,000 feet, and for the season 19,608,000 feet, against 16,671,700 feet last year.

The shipments of lumber and timber from Pensacola, Fla., for the week ending the 7th inst. aggregated 5,808,856 feet, walnut lumber 30,000 feet and oak staves 5300.

The saw mill of T. B. Pace, near Hazelhurst, Ga., was burned on the 14th inst., together with 100,000 feet of lumber and a large quantity of shingles. There was no insurance.

The saw mill of Isaac McDaniels, near Bayard, W. Va., on the West Virginia Central Railroad, was burned on the 13th inst. Loss is estimated at \$10,000; insurance unknown.

The Wando Lumber Co. of Charleston, S. C., was incorporated last week, with a capital stock of \$8000. The incorporators are James O'Hearn, John A. Hertz and William A. Doterer.

It is understood that the Gress Lumber Co. will erect a large saw mill near Enigma, Ga., on the Brunswick & Western Railroad. The company is buying large quantities of timber land in that section.

The Hilton & Dodge Lumber Co. of Brunswick, Ga., and St. Simons has purchased from Brobston, Fendig & Co. a large tract of timber in McIntosh county, comprising 7320 acres of thick growth pine timber land. The consideration is said to be \$30,000.

Perkins & Scarborough have purchased 850 acres of timber land at Carsons, on the Petersburg & Weldon Railroad, and E. L. Perkins a tract of 174 acres three miles west of Carsons. Both tracts are unusually well timbered; the price paid for them being about \$9000.

The Atlantic Coast Lumber Co. has awarded the contract to build a big lumber plant at Georgetown, S. C., to George L. Borum of Sussex, Va. Embraced in the plant are twenty-five big brick and iron dry-kilns, which, with the buildings, will call for 5,000,000 brick.

The shipments of lumber from the port of Charleston, S. C., for the week ending the 13th inst. amounted to 1,242,864 feet, of which 425,000 feet went to Baltimore and 817,864 feet to New York. The total

shipments since September 1 amount to 6,940,377 feet, against 2,062,883 feet last year.

The Sprudell Lumber Co.'s mill at Sprudell, Ark., was destroyed by fire on the 11th inst., together with 100,000 feet of dressed lumber. The entire equipment was lost, and the value is placed at \$15,000. The company was composed of capitalists of Texarkana and Little Rock. Insurance unknown.

It is reported that Neidringhaus Bros. of St. Louis, prominent bankers, have just closed a deal by which they sell 350,000 acres of mineral and timber land to the Tennessee Central Railroad Co. The land lies along the line of the road in Cumberland and Fentress counties. The consideration is not stated.

Dewitt C. Wilkinson and Elbert Kishpough of Michigan purchased last week 10,000 acres of timber land in Whitley county, Kentucky, from John A. Black of Barbourville, Ky., for \$10,000. The purchasers will erect large saw and planing mills on the property and go extensively into the work of development.

The Houston Lumber Exchange, recently incorporated at Houston, Texas, is now in its new offices in that city, and the work of the exchange is progressing in a most satisfactory manner. The roll of membership is strictly a representative one, and is increasing rapidly. Mr. C. A. Newning is secretary of the exchange.

The property of the Seaboard Manufacturing Co. and the Seaboard Railway Co. of Mobile, Ala., it is said, is to change hands, though Mayor S. T. Prince of Mobile will continue as general manager. The new owners will extend both the milling and railroad property, and will operate them on a more extensive scale.

The Angola Lumber Co. of Norfolk, Va., has recently been buying large quantities of standing timber in Onslow, Pender and Duplin counties, North Carolina. It is stated that the company has now over 100,000,000 feet of standing timber purchased, and will establish a saw mill at Wilmington, and probably one at Swansboro.

The plant of the Brewer Lumber Co. at Carrollton, a suburb of Saginaw, Mich., was damaged by fire on the 12th inst. to the extent of \$60,000. The shingle mill, planing mill, cooperage mill and a portion of the plant for the manufacture of barbed-wire reels with 2,000,000 feet of lumber, were destroyed. The company will rebuild at once.

The shipments of lumber by the saw mills at Orange, Texas, for the month of September aggregated 13,440,323 feet, being distributed as follows: Litcher & Moore Lumber Co., 5,527,020 feet; Orange Lumber Co., 2,120,538 feet; Wingate Lumber Co., 2,328,920 feet; Bancroft Lumber Co., 1,181,196 feet; Alexander Gilmer, 2,272,649 feet.

An important deal was closed last week in Parkersburg, W. Va., when the Nicola Lumber Co. plant was sold to the Nicolette Lumber Co. The price paid was \$120,000. The new company is entirely composed of Pittsburg parties with the exception of George Ecker, who will be superintendent under the new management. The plant has a capacity of 10,000,000 feet of lumber a year.

The saw-mill plant of the Bridges & McKeithan Lumber Co. at Lumber, N. C., on the Sumter & Gibson branch of the Atlantic Coast Line, is being rushed to completion. The mill building has been erected, and the machinery is now being placed. The daily output of the mill will be from 50,000 to 75,000 feet of lumber and timber. The company has a fine supply of pine and hardwood timber to draw upon.

MECHANICAL.

Heating, Ventilating and Moistening Textile Mills.

In no class of manufacturing buildings has the adaptability of the blower system been more carefully considered than in the textile mills.

This is natural, when the perfection of appointments in such structures is considered. The general similarity of construction in buildings of this character has greatly facilitated the standardizing of details in connection with the heating, ventilating and moistening system.

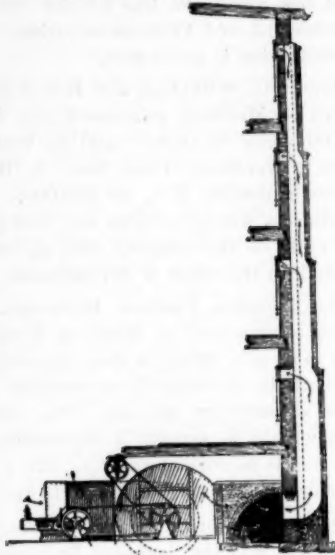


FIG. 1.

Modern textile-mill construction is generally considered to be evidenced in brick walls, numerous and large windows, wooden floor framing consisting of large timbers extending across the mill at intervals of about ten feet, supported by the walls and by wooden columns, the floor being of three or four-inch plank, with one-inch top finish. Such construction is simplicity itself.

The uniform size and arrangement of the machines within such a building naturally compels the preservation of straight and ample passageways between the indi-

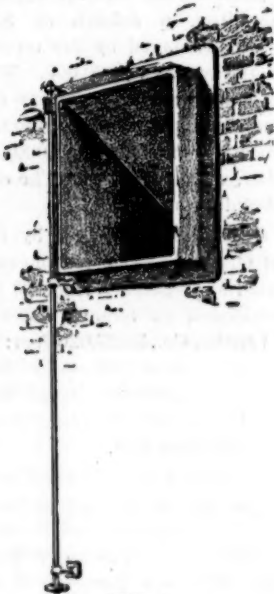


FIG. 2.

vidual machines, as well as around them next to the walls. Evidently there is no practical opportunity for the introduction of heating flues anywhere within the building, because of their serious interference with such uniformity. But the brick walls present a most convenient location for flues of the requisite area.

In one of the forms adopted such flues, projecting outward from the building, are placed along one side of the structure only, and at intervals of forty to seventy feet, according to the character and construction of the building. In the basement, or ground floor, nearly midway of

its length, is located the apparatus, usually of the type known as the three-pulley rig, so arranged that the fans may be driven by the mill engine during the day, and, if necessary, during the night by special fan engine provided for the purpose.

Extending along the floor upon which the apparatus stands, or beneath it, if desired, is a brick duct formed upon one side by the wall of the building itself. This duct, in its most approved type,

forms in section what is known as a quadrant arch, as shown in Fig. 1. Connection from this duct is made with each pilaster flue, the duct being gradually reduced in area as air is thus discharged from it.

The flue is also decreased as it extends upward, to compensate for the air delivered to the various floors. Its general construction must be evident in Fig. 1. At a sufficient distance below the floor beams, to avoid weakening the construction, outlets are provided from this flue into each of the floors.

Each opening, in turn, is fitted with a special damper of the type presented in Fig. 2. This consists of a cast-iron frame bricked into the wall and sufficiently strong to prevent weakening the same. Pivoted at the top of this frame, and swinging inward, is a sheet-iron plate, serving the double purpose of damper and deflector, and adjustable by a worm on the end of the vertical rod acting upon a gear upon the damper axis to move it to any desired position. The rod extends down to within easy reach of the operative.

Evidently the result of such an arrangement of the blower system in connection with a building of the character described is to provide the most excellent opportunity for successful heating from one side of the building only. The smooth ceilings, without beams to interfere with the movement of air directly across the building, make it possible to fully supply the side farthest from the flues, while the moving pulleys, belting and shafting which intervene fortunately present just enough opposition to sufficiently break up these air currents and thoroughly mix the air throughout the room. Although, conditions permitting, it is usually advisable to place the flues upon the least exposed side of the building and discharge the air toward the colder side, nevertheless, in practice, the effect of location of flues is seldom perceptible in such a structure,

In the arrangement just described each individual flue supplies heated air to each of the floors of the building. A somewhat different arrangement is presented in Figs. 3, 4 and 5. In this building, which was designed distinctively as a yarn mill, no projecting pilaster flues were introduced, but each pier between the windows along one side of the building was provided with an internal rectangular tile lining serving as a flue, and as indicated in Fig. 4. Each individual flue supplies

structured of corrugated sheet iron, covered level with cement. Such an arrangement is both strong and serviceable, and is to be preferred substantially in this form wherever the duct has to be excavated. Another scheme of top covering consists in laying brick upon tee irons extending at proper intervals across the top of the duct. As is evident in Fig. 5, reduction in area as the duct progresses is in part secured by raising the level of its bottom, which, in consideration of the

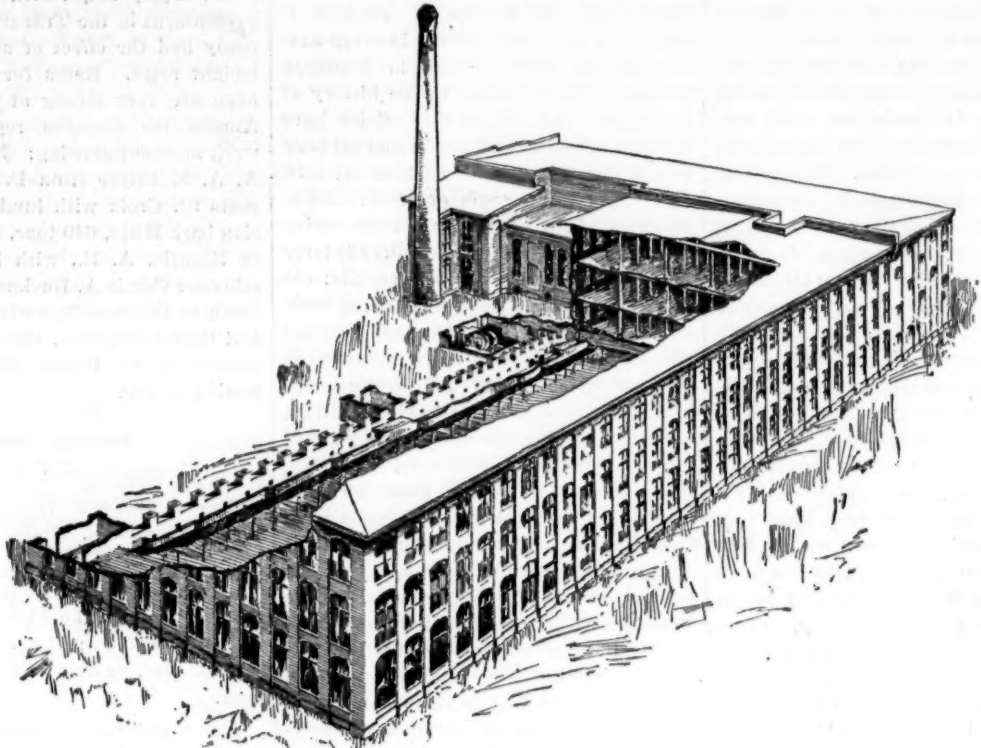


FIG. 3.—PACIFIC MILLS, YARN MILL, LAWRENCE, MASS.

air to only a single floor, so that, there being three floors, every third flue supplies the same floor. As the piers are located ten feet apart, this brings the openings on each floor thirty feet apart, making them even more numerous than with the ordinary pilaster arrangement. Evidently in a building of four stories the openings would, under similar conditions, be forty feet apart. Each flue opening is fitted with a special form of damper somewhat different in construction from that shown in Fig. 2.



FIG. 4.



FIG. 5.

This arrangement of flues avoids the break in architectural harmony resulting from the introduction of the pilaster flues, but at the expense of greater multiplicity in flues and openings and in greater opportunity for loss of heat, which is, however, materially reduced by the use of the flue linings. Each flue connects at its base with the main horizontal duct, of which the building wall forms one side. The top, which is arched in form, is con-

duplex type, each fan being driven by its individual engine and the entire apparatus being located in an independent building. The absence of a basement under the mill is a sufficient explanation for this location. The underground ducts from the two fans unite before they pass beneath the mill wall, and are here provided with a swinging damper so arranged as to automatically regulate the pressure and volume of air discharged

from each fan, and to further close immediately the duct from either fan in case it is shut down. This apparatus was built and installed by the B. F. Sturtevant Co. of Boston, Mass., from whose "Treatise on Ventilation and Heating" the preceding description and illustrations have been taken.

The duct extending from the apparatus toward the extreme right-hand end of the mill, as presented in the illustration, supplies the picker-house, which is there located, and which, owing to the character of the process carried on within it, requires an exceptionally large volume of air for the double purpose of maintaining the temperature and making good the amount withdrawn by the picker fans.

Centrifugal Exhaust Head.

The design of this exhaust head, simple as it is, reveals such a clear understanding of the principle involved in the successful separation of water and steam that a mere statement of this principle is enough to show the efficiency of the device. It is well known that centrifugal force is proportional to the weights of the bodies in motion. Therefore a cubic foot of water, revolving around the center A



FIG. 1.

in the sketch, will exert 1562 times the force exerted by the cubic foot of steam, for water weighs 1562 times as much as exhaust steam of the same temperature. Therefore, if a mixture of water and steam be given a whirling motion within a circular case, the water will be thrown violently against the sides, and absolutely separated from the steam. The dry steam will readily escape upward through a central opening which the water cannot reach, owing to the opposition of centrifugal force. Upon this principle the Sturte-

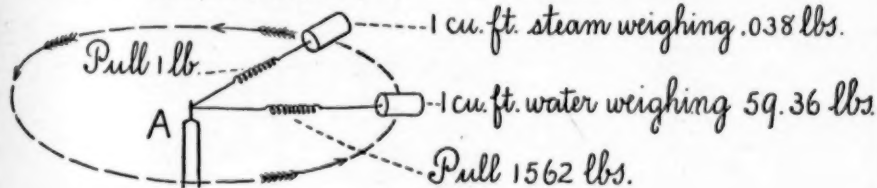


FIG. 2.

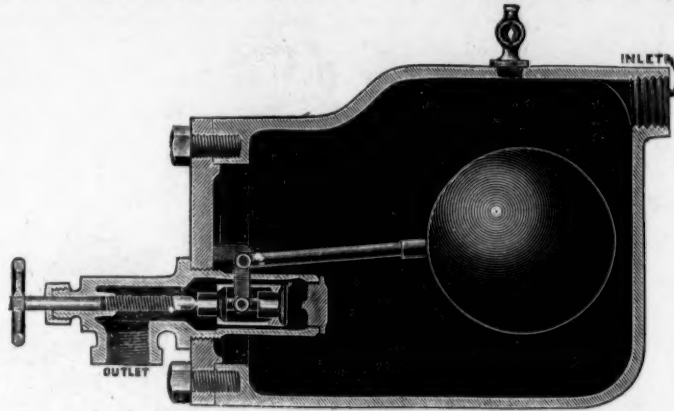
vant exhaust head is designed. It is absolute in action, simple in construction, durable in character, and produces no back pressure upon the engine. It is built of heavy galvanized iron, sixteen to twenty gauge, according to size; all external joints are close-riveted and soldered, and the internal pipes are double-braced.

The B. F. Sturtevant Co., Boston, Mass., builds these heads in sizes to fit pipes from one inch to twenty inches, and is flanged in sizes above ten inches.

Cook Steam Trap.

This improved trap is claimed to embrace all the features of the more expensive traps, at the same time being so simply constructed and so easily accessible for repairs and inspection it will meet the approval of all who use it. It will be seen that the trap operates with a

float balance valve; this valve being balanced permits trap to work under both high and low steam pressure. The floats in this trap are seamless, and have all been tested to 300 pounds pressure. It will also be noticed that the valve is a combination blow-off and discharge valve, the valve stem entering the valve chamber pressed against the outer end of valve



THE COOK STEAM TRAP.

and by screwing same in raises valve from seat and allows trap to be blown out through the main valve, thereby cleaning same from any grease or sediment which may have accumulated.

The entire internal mechanism can be taken out by removing cap from end of trap. It will be seen there are very few parts to this trap, making it simple and effective.

For further details write the manufacturer, the Standard Gauge & Manufacturing Co. of Cleveland, Ohio.

A New Industrial Situation.

Incessant change is a characteristic of the advancing tide of mechanical progress. Gas is destined to find a far wider use than heretofore; it is to be applied to operate engines and locomotives in place of steam. Natural gas, producer gas, illuminating gas and gasoline are all being utilized to supply fuel for motive power. Gas has long served for lighting and heating purposes, but the new departure turns to account another of its properties—its explosive force. Instead of gas being the direct agent for illumination, it will be employed to drive engines to generate electric current. A pioneer in this new industrial situation is George Westinghouse, whose recently-invented type of gas engine is meeting with marked success in several channels.

with expensive systems of distribution for lighting purposes in competition with illuminating gas, and for the delivery of power in places where steam boilers and engines are not advisable. The cost of the generating plant, and of the system of distribution, has, however, limited the use of electricity, so that, notwithstanding its great superiority for lighting, its

use has had no appreciable effect in limiting the growth of illuminating gas plants.

Recent developments have proved that the modern gas engine is admirably adapted for electric lighting, as its economy is very high and its speed regulation as good as that of a first-class steam engine. The electric business stimulated experiments in the direction of producing this gas engine, which is claimed to be the only one that can be direct-connected to an electric generator. Westinghouse gas engines have the armature on the crankshaft, direct-coupled, or directly belted, as in the steam engine.

The governor and mixing valve control the amount of the charge in accordance with the load. The charges are ignited by an electric igniter. This igniter is duplex, and the bonnet covers two separate mechanisms, which makes it possible to

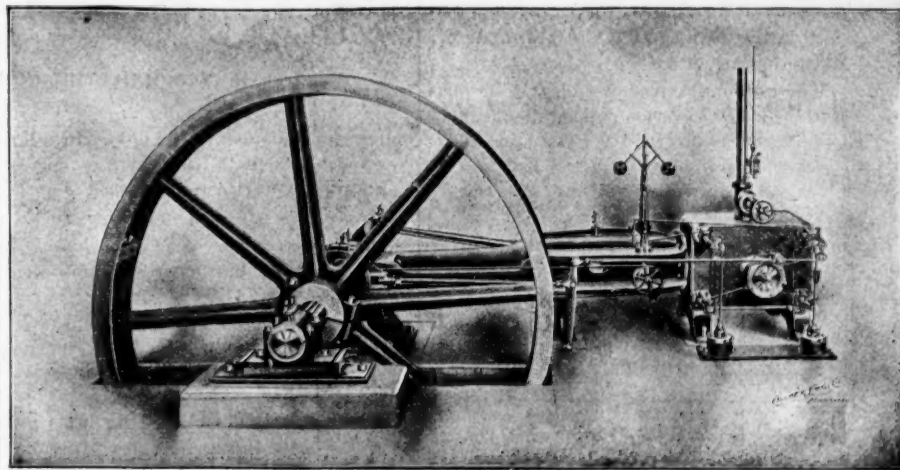
Hotel System is lighting its hotels at Ormond and Miami by this method. The gas engines are very cleanly, give off no smoke or disagreeable odor, are practically noiseless and extremely economical.

The marvelous perfection of design and mechanical construction of Westinghouse gas engines are readily demonstrated. The Westinghouse gas engine is claimed to be the only one with sufficient close regulation to admit of being direct-connected to a dynamo. Any variation in the speed of the engine causes a winking of the electric lights, but this difficulty is entirely overcome by the abolition of the "hit-and-miss" type of gas engine and the substitution of the two and three-cylinder type of the Westinghouse Machine Co.

At the Ormond Hotel three alternating current dynamos are to be run in multiple. Not only must the speed of the engines be uniform, and uniformly maintained under varying loads, but the angular variation must be reduced to a minimum. It is only during recent years that the closer regulation of steam engines has enabled direct-connected alternating dynamos to be run in parallel. One proof of the intrinsic merits of the Westinghouse gas engine is that the plants at the Ormond and Royal Poinciana Hotels are to be run in parallel.

Vilter Improved Corliss Engine.

The "Vilter" Corliss engine is built by the Vilter Manufacturing Co. of 832 Clinton street, Milwaukee, Wis. The company's existence dates back to the year 1867, at which time the business was started in a small way, and it has been gradually increased until it now occupies one of the foremost positions in its line in this country. A large tract of land is occupied by the new and commodious plant, embodying every facility for handling small and large work. The works cover over four acres of ground, and were built in 1893, at which time modern tools



VILTER IMPROVED CORLISS ENGINE.

change the connections of the wire from the battery to either set of terminals while the engine is running. Both sets of terminals can be used at one time, thus insuring absolute certainty of ignition. This is often done in large electric-station work.

This mode of governing is similar to that of the steam engine, and for picking up a heavy load it is even claimed to be superior.

The Westinghouse gas engine has long passed its experimental stage, and is now one of the established commercial factors to be considered by all users of motive power. Hundreds of these machines are installed, performing every class of work under the most arduous conditions.

One sphere of special usefulness for gas and gasoline engines is found in supplying electric lighting for hotels and private residences. The Florida East Coast

and appliances were adopted. The railroad facilities are unsurpassed, and the access to the plant by means of roadways is also exceptionally good. The principal manufactures of the Vilter Manufacturing Co. are Corliss engines, refrigerating and ice-making machinery and complete outfits for brewers and bottlers. Complete steam plants are also installed, comprising boilers of every description, also heaters and pumps.

The illustration herewith represents the company's improved Corliss engine, embodying all the latest improvements, and the same are found in daily use in all parts of this country, though a large number are yearly exported.

The third semi-annual convention of the Texas Real Estate Association, of which Mr. T. J. Skaggs is secretary, will meet at Fort Worth January 16 and 17,

Automatic Steam Pump Regulator.

Thrifty steam users of modern business acumen are always willing to have their attention called to improved devices for their plants. Such a device is illustrated herewith, and an examination of the principles involved in its construction and operation will readily present a clear idea of the many advantages pertaining to its use.

Automatic control of flow of water to a steam boiler has many commendatory

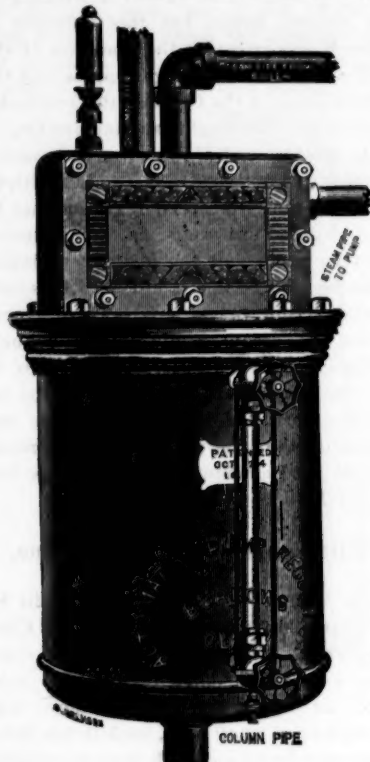


FIG. 1.

features, and inventors have directed their efforts towards such control in a practical and economical manner. The Burrows automatic steam-pump regulator, illustrated in general and sectional view, will interest steam users on sight. It is manufactured by the Burrows Manufacturing Co. of 143 W. Third street, Williamsport, Pa.

The sectional cut shows clearly its operation. A seamless copper float rests

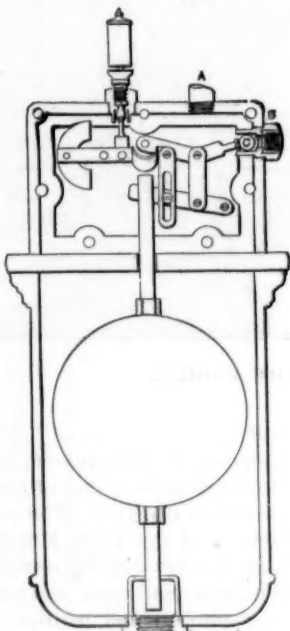


FIG. 2.

upon a body of water, and is kept in a central position by the guides shown, the upper guide being connected to the operating levers. Steam is admitted to the steam chest through the pipe A. When the water-level goes down the float draws the valve C from its seat, admitting steam through pipe B to the pump. As the water rises the valve C is slowly seated, and when the proper level is reached the steam supply to the pump is shut off.

The whole operation is very simple. No packing of any kind is used. All parts work loosely and freely, and there is no possibility of the regulator failing to act. If for any reason the water is removed from the boiler more rapidly than the

building will front ninety-nine feet, with a depth of 198 feet. The lot cost \$20,000.

Crocker-Wheeler Co. at Charlotte.

The increasing installations of electrical machinery for all purposes in the South



CHARLOTTE CONSOLIDATED CONSTRUCTION CO.'S OFFICE BUILDING.

pump can replenish it, the float will fall so low that the whistle valve will be opened, calling attention to the trouble.

The valves have a tendency to seat themselves from use and work loosely in the guides, so that wear will not affect their operation.

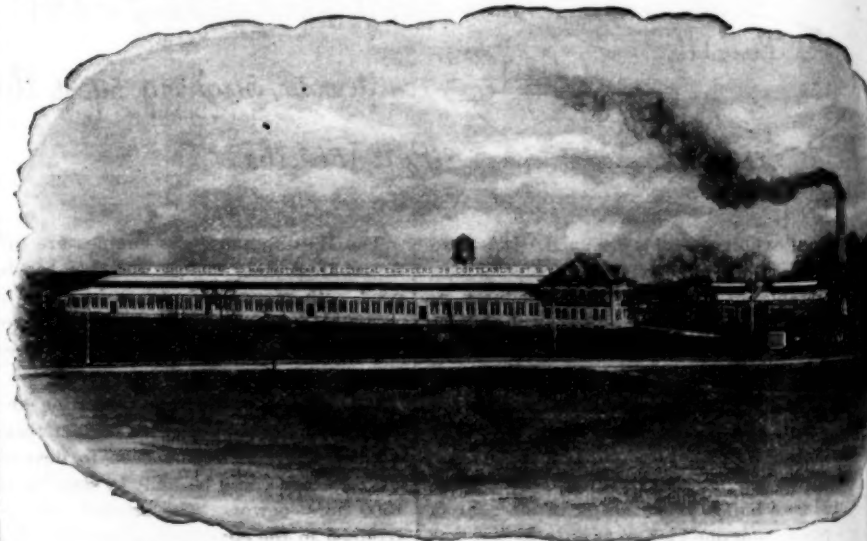
All internal parts are made of brass.

Used either for single boiler or battery of boilers.

A \$100,000 Office Building at Charlotte, N. C.

Messrs. Hayden, Wheeler & Schwend of Charlotte, N. C., are now preparing plans and specifications for a \$100,000 office building for the Charlotte Consolidated Construction Co. We present an illustration of the structure. This building will cost \$100,000, and will be six and one-half stories high, with the front eight full stories. The style is the French renaissance, first story of granite, with massive four-foot-broad pilasters with polished surfaces. The stories above will be of pressed brick of a rich golden color. The seventh story will be richly ornamented in terra-cotta panels of the same color and form. The frieze to the heavy cornice, which projects four feet, is ornamented by richly-carved medallions. The eighth story is treated as a mansard roof, from which rises the dome, the lower story of which will contain offices, while above the dome still extends two stories higher. The entrance is of polished columns cut from Mexican onyx and carrying a richly-ornamented pediment. The

has prompted many important manufacturers of electrical machines and apparatus to arrange for Southern offices. One of these important companies is the Crocker-Wheeler Company of Ampere (near Newark), N. J., manufacturer and electrical engineer, and an illustration of



CHARLOTTE (N. C.) OFFICE OF CROCKER-WHEELER CO.

its Charlotte (N. C.) office recently established is presented. The company's increasing Southern trade has prompted this action, and it expects that it will largely increase its share of orders from that section. Electrical machinery of all kinds is the Crocker-Wheeler product, including direct-current apparatus, direct-

connected and belted motors, electric-power-transmission plants, elevator motors, mill motors, street-railway generators, etc.

Wood That Will Not Burn.

For many years builders and contractors have been called upon to erect fire-proof buildings, and structures of this class (so-called) are numerous nowadays. But although they bear the name of fire-proof, many of these structures have been actors in conflagrations of varying extent.

As wood has always entered so largely into the construction of buildings, much attention has been given to the fireproofing of that material by subjecting it to some process. The attempts to make buildings fireproof did not, until within the past several years, go deep enough into the matter, and many experiments have been made of late by those interested in the subject.

A process of fireproofing wood that has proven itself, by most rigid tests, to be thorough, is that by which the American Wood Fireproofing Co. prepares lumber. Briefly, it may be said that the process is to submit the wood to a steam bath, which penetrates so as to soften and loosen the dried juices which have remained in its fiber, after which a powerful vacuum pump is applied, the vacuum as recorded by the gauge being from twenty-seven and one-half to twenty-eight inches. The immediate effect of this is to draw out of the wood all the juices, saps, etc., and leave it in a condition that may be described as an extremely finely-divided honeycomb. When this treatment is finished an alkaline solution is allowed to flow into the cylinders (in which the wood undergoes its treatment), and as it rises is absorbed by the cavities of the wood until the latter is nearly saturated. The pressure pump assists this absorption, the pressure being raised to 200 pounds to the square inch. When taken out the wood is then ready to be dried either in the air or in dry-kilns. In drying the water evaporates and leaves all the inner walls of the cells covered with minute crystals of fireproofing salts.

It is claimed that the wood retains all its original properties, except that by the process that is withdrawn which would act as a fermenter, and that hence the treatment is also preservative of the wood; and further, that in testing pieces of wood or shaving so treated they could

not be made to flame even by the use of a blow-pipe, instead merely glowing, which ceased the instant the blow-pipe ceased.

The company has offices in the Bowling Green Building on Broadway, New York city, and will furnish further particulars to those who may desire them.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted." In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Anniston—Electric-light Plant.—The Anniston Electric Co. has been granted a franchise to erect a light and power plant.

Anniston—Lime Works.—The Lagarde Lime & Stone Co. has put two of its furnaces in operation and is now overhauling its third furnace, having capacity daily of seventy-five barrels; this will give the company a total of 250 barrels per day.

Birmingham—Engine Works.—A plant for the building of blowing engines will be erected at East Birmingham in connection with the machine and foundry works of the Alabama Machine & Foundry Co.

Birmingham—Bakery.—Chartered: The Boudurant-Lloyd Company, to conduct a bakery; capital stock \$4000; incorporators, E. C. Boudurant, J. A. Myatt and Henry R. Dill.

Florence—Shingle Mill.—Joseph A. Nichols will enlarge his shingle mill.*

Gurley—Flour Mill.—Efforts are being made by the citizens of Gurley to locate the Paint Rock Milling Co.'s flour mill at Gurley.

Huntsville—Cotton Mill.—The Dallas Manufacturing Co. will hold a stockholders' meeting in November at which doubling the mills will be considered. Should it be decided to double probably a 25,000-spindle and 750-loom mill, with bleaching, all costing about \$500,000, will be erected.

Huntsville—Cotton Mill.—The Huntsville Cotton Mill Co. will expend from \$50,000 to \$100,000 in the erection of a two-story addition 150 feet long to be used as thread mill; has also perfected arrangements for the old Huntsville Cotton Mill to be supplied with new machinery at a cost of not less than \$125,000; Luke Matthews, manager.

Mobile—Milling.—The Seaboard Manufacturing Co. and the Seaboard Railroad Co. will change hands, and the new owners will extend both the milling and railroad property, operating on an enlarged plan and employing 500 operatives.

Piedmont—J. D. Lacey and associates of Chicago have recently purchased brown-ore beds near Piedmont, and will develop.

Prattville—Cotton Mill.—J. T. Floyd, J. D. Proctor and a Mr. Trainer will erect a cotton mill at Allenville.

Selma—Courtthouse.—Plans and specifications will be considered until November 8 for erection of Dallas county courthouse, reported last week. Address P. G. Hood, probate judge.

ARKANSAS.

Nashville—Mining and Milling.—The Southern Consolidated Mining & Milling Co. has been incorporated, with a capital stock of \$1,000,000, by W. A. Borland, president; H. A. Turner, vice-president; A. H. Scoggin, secretary; W. W. Turner, treasurer, and Charles Jones, director.

Ozark—Bridge.—Franklin county will construct a steel bridge 270 feet long across Mulberry river, two spans, 120x150 feet, with 12-foot roadway, 110-foot wood approaches. Will let contract about November 15; B. W. Webb and J. T. Greer, commissioners.

Paris—Mercantile.—The Paris Mercantile Co. has been incorporated, with a capital stock of \$18,000, by O. C. Wood and others.

Sevier County—Iron-ore Mines.—Major J. H. Paschal of Little Rock and associates have leased the Stewart and May iron-ore mines in Sevier county, and will develop on an extensive scale.

FLORIDA.

Braidentown—Electric-light Plant.—H. W. Fuller is endeavoring to establish an electric-light plant.

Cedar Keys—Turpentine Distillery, etc.—The McKinnon-Young Co. has been incorporated to manufacture turpentine, turpentine spirits, rosin, etc., with L. T. McKinnon, president; John R. Young, vice-president; H. A. McEachern, secretary; capital stock \$20,000.

Citrus County—Phosphate Lands.—J. H. Martin of Newberry has leased phosphate lands in Citrus county, and will erect a plant, etc.

Dunnellon—Turpentine Stills.—Maloy & West of Summerfield, Fla., and associates have purchased 60,000 acres of pine timber lands near Dunnellon at \$120,000, and will erect large turpentine stills, etc.

Early Bird—Phosphate Mill.—Faix & Hiller will erect another phosphate plant.

Early Bird—Phosphate Plant.—Heywards & Breyton are erecting phosphate plant.

Fairfield—Woodworking Factory.—A plant has been established to manufacture spokes, rims, etc., from hardwood.

Gainesville—School Building.—Wilson & Edwards of Columbia, S. C., are preparing plans for a graded school building at Gainesville to cost \$15,000.

Juliette—Phosphate Plant.—The Florida Syndicate is erecting a phosphate plant at Juliette.

Kissimmee—Ice Factory.—Efforts are being made for the establishment of an ice factory. Names of interested parties will be announced later.

Morrison—Phosphate Plant.—Pattens Manufacturing Co. is building phosphate plant near Morrison.

Newberry—Phosphate Plant.—J. Buttgenbach is building phosphate plant.

Ocala—Saw Mill.—A company in which N. Barco and R. J. Knight are interested will erect a \$50,000 mill at the head of Crystal river, near Ocala, to cut pine and cypress lumber and shingles; daily capacity 50,000 to 60,000 feet.

GEORGIA.

Calhoun—Flour Mill.—Thomas Black will remodel his mill to the roller system; contract not awarded.

Cave Spring—Iron-ore Lands.—Henry F. DeBardeleben of Birmingham proposes to develop recently-acquired brown iron-ore mines near Cave Spring, and will erect large washers and build 200 or 300 houses for operatives.

Canton—Cotton Mill.—Stock company previously reported to be organized for erection of mill has chartered as the Canton Cotton Mills, with capital stock of \$100,000, privilege of increasing to \$500,000. Among the incorporators are R. T. Jones, Sam Tate, William Teasley, T. M. Brady, B. F. Perry, William J. Webb and others.

Cedartown—Flour Mill.—G. R. Ramsey will erect a 20-barrel roller flour mill; already has power and cleaning machinery.*

Crane Eater—Flour Mill.—Joseph Allison of Calhoun, Ga., will erect a new flour mill at Crane Eater; contract not awarded.

Dublin—Cotton Mills.—William Pritchett has been chosen president and M. W. B. Thomas manager of the Dublin Cotton Mills, previously reported as organized with capital stock of \$50,000 for erection of mill.

East Point—Collar Factory.—Couch Bros. of Senola, Ga., have erected a large factory at East Point and removed to that place; capacity of plant has been doubled.

Folsom—Flour Mill.—Mosteller Bros. contemplate remodeling their mill to the roller system.

Gainesville—Brick Works.—George R. Wheeler will establish a brick plant.

Hartwell—Cotton Mill.—J. D. Matheson and E. B. Benson have sold their water-power (Tugalo rapids) to Boston parties (as reported last week), who intend to erect a cotton mill.

Milledgeville—Iron Mines.—Joel Hurt of Atlanta, Ga., and associates have purchased the iron mines at Milledgeville of the Iron Belt Railroad Mining Co. and organized a new company to develop.

Newnan—Cotton Mill.—The Newnan Cotton Mills contemplate expending about \$50,000 for improvements and enlargements.

Newnan—Cotton Mill.—R. D. Cole, Sr., M. F. Cole, H. C. Arnold, J. A. Hunter and others are forming a cotton-mill company, to have capital stock of \$250,000.

Tallapoosa—Iron Furnace.—W. J. McCurdy, J. T. Tuggle, M. A. Greene and E. P. C. Fowler, Jr., have incorporated the Southern Iron Co., with a capital stock of \$15,000, for the purchase and operation of an iron furnace; M. A. Greene, general manager.

Shoal Creek—Flour Mill.—Moore Bros. of Waleska have awarded contract for flour mill at Shoal Creek.

Union Point—Cotton Mill.—The Union Manufacturing Co. has installed a complete plant for the manufacture of ladies' underwear, and is considering the establishment of a dyeing and bleaching plant. Samuel H. Sibley is president.*

Thomson—Evaporating Plant.—R. E. L. Evans is erecting a steam-heat evaporating plant for fruits of all kinds.

KENTUCKY.

Barboursville—Saw and Planing Mills.—Dewitt C. Wilkinson and Elbert Kishpough have purchased 10,000 acres of land in Whitley county, and will erect large saw and planing mills.

Cadiz—Iron Furnace.—W. E. James of Keokuk, Iowa, representing a large financial concern, is investigating with a view to purchasing the Hillman lands in Trigg and Lyon counties, containing 30,000 acres, and operating furnaces. John Feland of Hopkinsville, Ky., may also be addressed.

Louisville—Distillery.—Chartered: The Glen Springs Distillery Co., with a capital stock of \$4000, for the manufacture of whiskey, etc.; incorporators, J. Rosenbaum, R. G. Shipman, H. F. Spooner, all of New York, and others.

Owensboro—Iron Foundry and Machine Shops.—The Kratz Foundry and Machine Shops of Evansville, Ind., will be removed to Owensboro. Address Capt. William Kratz.

Yelvington—Distillery.—The Beechwood Distillery Co., reported recently (under Owensboro) as incorporated, has purchased and will operate the distillery formerly owned by C. L. Applegate & Co. at Yelvington; Frank A. Cannon, secretary-treasurer.

LOUISIANA.

Alexandria—Electric-light Plant, Sewerage, Street Improvements, etc.—The city will vote upon issuing \$71,000 of bonds—\$30,000 for sewerage and drainage, \$28,000 for street paving, \$8000 for improvements to power-house and electric-light plant, and \$5000 as a nucleus for the formation of a public school fund. Address "The Mayor."

Crowley—Foundry and Machine Shop.—J. A. Carlisle & Son have purchased the machine shop of James Christian, as recently reported, and will install new machinery and add a small foundry.*

Lake Providence—Telephone System.—W. G. Garrett, civil engineer, representing the Cumberland Telephone & Telegraph Co., is making preliminary surveys for construction of a long-distance telephone system from Lake Providence to New Orleans.

New Orleans—Cotton Mill.—W. H. Cook, 345 Carondelet street, is interested in the

erection of a cotton mill to cost about \$500,000.*

New Orleans—Carriage Company.—The Fenner Carriage Co., Limited, has been incorporated to conduct a general carriage and wagon business, with a capital stock of \$30,000, by E. C. Fenner, John Glynn, Jr., C. H. Solanas and others.

MARYLAND.

Baltimore—Publishing.—Chartered: The Sinclair-Farber Printing & Publishing Co. has been incorporated by Francis J. Sinclair, Henry J. Farber, Jr., William F. Beasley and others; capital stock \$10,000.

Baltimore—Cigar Factory.—The William H. Beale Cigar Co., recently reported as incorporated, succeeds Wm. H. Beale, having purchased his plant and business. Address No. 40 South Charles street.

Baltimore—Chemical Works.—The Sal-Veget Chemical Co. has been incorporated by Frank R. Weaver, Herman E. Voltz, Jas. H. Warner and others for the manufacture of veterinary medicines; capital stock \$10,000.

Baltimore—Trunk and Bag Company.—Chartered: The Monumental Trunk & Bag Co., by Christopher J. Dunn, Adam Fuerk, Jerome W. Sullivan and others; capital stock \$4000.

Cumberland—Steel Plant.—The Cumberland Steel & Tinplate Co. has about completed the erection of a four-mill steel plant comprising one 48 mill, one 38 mill and two 26 mills, with two stands of cold rolls; the mill is built entirely of steel, and is 80x250 feet; entire plant will be lighted by electricity; Howard H. Dickey, president.

Ellicott City—Manufacturing Plant.—Negotiations are pending by Baltimore (Md.) capitalists for the purchase of site at Ellicott City for the erection of a large manufacturing plant.

Glenarm—Saw and Grist Mill.—F. X. Hooper of Baltimore is erecting a saw and grist mill.

Hagerstown—Ice Plant.—The Hagerstown Brewing Co. has awarded contract for a 30-ton ice plant to cost \$15,000.

Hagerstown—Cold-storage Plant.—It is reported that the L. Hoster Brewing Co. of Columbus, Ohio, will locate a large cold-storage plant at Hagerstown.

Lonaconing—Water Works.—The George's Creek Coal & Coke Co., composed of Fairmont and Lonaconing capitalists, will, it is reported, construct a system of water works at Lonaconing. R. L. Somerville of Lonaconing may possibly give information.

Maryland.—The Maryland Smokeless Coal Co., with principal office in Chicago, Ill., has been incorporated under West Virginia laws with a capital stock of \$25,000 by C. A. Bickett, H. M. Sharp, Henry A. Gardner, W. Guthrie and Henry Frantzen, all of Chicago, Illinois.

Washington, D. C.—Chartered: The Apartment House Co., to buy, sell and operate hotels, with a capital stock of \$150,000; C. D. Waters, president.

Washington, D. C.—The Chesapeake & Potomac Telephone Co. proposes to erect an exchange at Georgetown, one in the vicinity of Mt. Pleasant, and probably a third in East Washington.

MISSISSIPPI.

Gloster—Cotton Mill.—Efforts will be made to organize a stock company for the erection of a cotton mill. Names of interested parties will be announced later.

Hazlehurst—Electric-light Plant.—R. N. Miller has been granted franchise to erect an electric-light plant of 1000 lights capacity.*

Natchez—Cotton Mill.—It is reported that the Natchez Cotton Mill Co. will buy a mill which has been idle for some time and put it in operation.

Winona—Spoke and Rim Factory.—Hoopes Bros. & Darlington will, it is reported, remove their plant to another location.

MISSOURI.

Eminence—Copper Mines.—The Eminence Land & Mining Co. has been incorporated, with a capital stock of \$6000, by J. H. Berkshire (president) and others.

Joplin—Lead Mines.—The Philadelphia Zinc & Lead Mining Co. has been incorporated, with a capital stock of \$3,000,000, and will at once erect extensive mills for the development of lead and zinc ores in Christian county. George O. Agnell of Philadelphia

phia, Pa., is general manager; Clay Gregory of Joplin, assistant general manager and resident engineer; E. Cooper Shapley, 318 Girard Building, Philadelphia, Pa., attorney and counsel.

Joplin—Lead and Zinc Mines.—Chartered: The Tan Yard Hollow Lead & Zinc Co., with a capital stock of \$100,000, by Willard I. Rush, Harry C. Goddard and Herbert Mills.

Joplin—Zinc Smelter.—F. S. Goldsmith, Shepard Building, proposes the establishment of a large zinc smelter; \$500,000 is said to have been subscribed by Eastern capitalists.

Joplin—Lead and Zinc Mines.—Chartered: The Delaware Land & Mining Co., with a capital stock of \$20,000, by F. H. Turner, W. Knight and G. W. Layne.

Kansas City—Grain Company.—Chartered: The Brinkmann-Reinertsen Grain Co., with a capital stock of \$20,000, by G. R. Brinkmann and others.

Kansas City—Sash, Door and Blind Factory.—The Western Sash, Door & Blind Co. will, it is reported, erect new buildings and greatly increase its capacity; 500 additional operatives will be employed.

Kansas City—Lead and Zinc Mines.—The Arc Lead & Zinc Co. has been incorporated, with a capital stock of \$1,000,000, to operate mineral lands and mines in Missouri, Arkansas and West Virginia, especially lead and zinc mines. C. H. Kirshner, George C. Mosher, J. H. Crum, E. C. Smith and Theo. Remley are among the incorporators.

Kansas City—Supply Company.—The Street Railway Supply Co. has been incorporated, with a capital stock of \$10,000, by W. D. C. Smith, W. B. Henderson, A. F. Brodie and Edwin Fowler.

St. Charles—Water Works.—The city will probably issue bonds for construction of the water-works system reported recently; H. C. Landfort, city clerk.

St. Louis—Publishing.—The Tradesmen's Publishing Co. has been incorporated, with a capital stock of \$50,000, by Charles W. Spafford, B. M. Spafford and Jared W. Young.

St. Louis—Cigar Company.—Chartered: The J. Friedman & Son Cigar Co., with a capital stock of \$50,000, by Julius C. Carstens, Louis Friedman and others.

St. Louis—Iron Foundry, etc.—Alfred W. Henry, C. A. Pullis and H. N. Henderson have incorporated the St. Louis Iron & Steel Foundry Co., with a capital stock of \$75,000.

St. Louis—Mercantile.—Chartered: St. Louis Mercantile Co., by Walter C. Boogher, George J. Tansey, C. W. Beggs and others; capital stock \$10,000.

St. Louis—Publishing.—Chartered: The Reform Publishing Co., with a capital stock of \$15,000, by M. H. Speyer, Max Able, Carl Beck and others.

St. Louis—Novelty Works.—Chartered: The Star Novelty Works, with a capital stock of \$2500, by J. F. Clopper, Hermann Holmecke and others.

St. Louis—Lead and Zinc Mines.—Micajah Mining Co. has been incorporated, with a capital stock of \$10,000, by Henry G. Burns, Sanford Doggett and H. O. Rockwell.

St. Louis—Furniture Company.—The Langen Furniture Co. has been incorporated, with a capital stock of \$5000, by Edward M. Langen and others.

St. Louis—Shirt, Overall, etc., Factory.—The Wright & Greene Manufacturing Co., reported last week as incorporated, will manufacture shirts, overalls, duck coats and pants, etc., and increase capital stock from \$60,000 to \$100,000 within the next ninety days.

Webb City—Lead and Zinc Mines.—The Bruce Mining & Smelting Co. has been incorporated, with a capital stock of \$400,000, by G. E. Rogers, Walter N. Snow, E. B. Lyman and others.

Webb City—Lead and Zinc Mines.—Chartered: The Bruce Mining & Smelting Co., with a capital stock of \$400,000, by G. E. Rogers, L. J. Gunn, John C. Stewart and others.

Webb City—Lead and Zinc Mines.—The Bruce Mining & Smelting Co. has been incorporated, with a capital stock of \$400,000, by G. E. Rogers, L. J. Gunn, John C. Stewart and others.

NORTH CAROLINA.

Asheville—Electric-power Plant.—Ladshaw & Ladshaw of Spartanburg, S. C., state that the report that they had contract for developing Hominy creek at Asheville is entirely premature, but they have been making improvements to the plant of the Asheville Electric Co.

Asheville—Jewelry Company.—Arthur M.

Field, David S. Gudger and H. J. Sage have incorporated the Arthur M. Field Co. for the manufacture and sale of jewelry, with a capital stock of \$15,000.

Fayetteville—Water-power Development.—A syndicate with headquarters at Richmond, Va., proposes to furnish power to Fayetteville by electrical transmission from the Lockville Falls, in Chatham county, provided a guarantee is given that 2000 horsepower will be taken. Walter L. Holt can probably give information.

Goldsboro—Cotton Company.—The Parker Cotton Co., recently reported as incorporated, will buy and sell cotton at present, and may later on manufacture, although no plans are matured as yet.

Hamley—Bleachery and Dyeing Plant.—Robert L. Steele of Rockingham, N. C., has made a proposition to establish a 10-ton bleachery and dyeing establishment at some point in North Carolina, probably Hamley, Sanford or Fayetteville.

Hickory—Cotton Mill.—The company recently reported to be organized by A. A. Shuford for the erection of a cotton mill has \$60,000 already subscribed, which will be increased to \$75,000. Order for machinery will be placed about January 1.

Huntsville—Flour Mill.—W. C. Crosby contemplates erecting a 20-barrel roller flour mill.*

Kernersville—Knitting Mill.—Davis, Crews & Co. will establish a knitting mill to be known as the Davis-Crews Knitting Mills.

Lilledown (P. O. Taylorsville)—Flour Mill.—J. H. Moore will establish a small roller flour mill, and has not as yet awarded contract for machinery.

Reidsville—Electric-light Plant.—An electric-light plant will be established in connection with the municipal water works. Address "The Mayor."

Rowan—Flour Mill.—The Mt. Ulla Roller Mill Co. has organized, with R. C. Knox, president, and John K. Goodman, secretary and treasurer, for the erection of a 60-barrel four-stand roller flour mill.

Scotland Neck—Saw Mill.—S. B. Kitchin has established a new saw mill.

Weaverville—Corn, Feed and Flour Mill.—The Weaverville Milling Co. will increase the capacity of its flour mill from fifty to 100 barrels; will also install corn and feed plant.

Wilmington—Electrical-supply House.—Andrew J. Howell, Jr., Box 32, will establish an electrical-supply house.*

SOUTH CAROLINA.

Abbeville—Cotton Mill.—The Abbeville Cotton Mills Co. has increased its capital stock from \$100,000 to \$500,000.

Burke—Lumber Mills.—The Bridgers & McKeithan Lumber Co., reported recently to increase its capital stock for the purpose of enlarging its plant, will erect entirely new buildings at Lumber, S. C., and has awarded contract to J. H. Howe & Sons; buildings will include planing mill 300x50 feet, commissary building 25x35 feet, with annex 15x20 feet, and from fifty to 100 cottages; output will be from 40,000 to 75,000 feet of lumber per day, and \$50,000 will be expended on plant.

Charleston—Lumber Company.—James O'Hear, John A. Hertz and William A. Dolter have incorporated the Wando Lumber Co., with a capital stock of \$7900.

Charleston—Water-works and Electric-light Plant.—Specifications for a new water-works and electric-light plant have been prepared by J. L. Ludlow and call for standpipe with inside diameter of twenty-five feet, eighty feet high, and with strength of 48,000 pounds per square inch; a reservoir with capacity of 25,000,000 gallons; at the reservoir will be a pumping station consisting of two separate buildings, one of which will contain the filtration plant, the other pumping engines, boilers and accessories. The contract is being prepared by R. G. Rhett, and as soon as it is drawn bids will be called for.

Columbia—Cotton Mill.—The Capital City Cotton Mill is the title of the 6000-spindle and 200-loom factory recently reported as to be built at a cost of \$100,000 after plans by W. B. Smith Whaley of Columbia.

Columbia—Telephone System.—The South Carolina Telephone Co. has been incorporated to conduct a general telephone and telegraph business, and will erect plant at once; incorporators, John H. Schofield, Henry O. Reid, Jerome Bradley, George W. Sutton and J. A. Helvin; capital stock \$50,000.

Greenville—Cotton Mill.—The cotton-mill company reported several weeks ago as being formed by J. I. Westervelt and others has been incorporated as the Quintin Mills, with

capital stock of \$300,000, to have 10,000 to 12,000 spindles and 300 looms; cottages for employees will be erected.

TENNESSEE.

Glendale—Flour Mill.—Cheek & Hall of Lillards Mills, Tenn., will erect a 40 to 50-barrel flour mill near Glendale.*

Greenville—Flour Mill.—M. P. Reeves contemplates the erection of a new roller flour mill; contract not yet awarded.

Kingston—Coal and Coke Company.—The American Knob Coal & Coke Co. has been incorporated, with a capital stock of \$50,000, by W. Fraser, W. H. Savory of Kankaka, Ill.; H. H. Hannah, R. M. McFerrin of Oliver Springs; J. W. Staples of Harriman and others. This item was reported last week under Roane county.

Memphis—Foundry and Machine Shops.—The Lee Gin & Machine Co. will rebuild its plant recently burned; plant will include machine shop 80x150 feet, two stories; foundry, one story, 75x100 feet; blacksmith shop, one story, 40x75 feet; pattern shop, four stories, 30x50 feet. Buildings will be equipped with modern tools and appliances, and cost \$12,500.

Rankins—Flour Mill.—Atchley & Son have awarded contract for the erection and equipment of a 40-barrel roller flour mill complete.

Tazewell—Flour Mill.—John Morrison will erect a 25-barrel roller flour mill.

Tennessee—Mineral Lands.—The Tennessee Central Railroad Co. has purchased 350,000 acres of mineral lands in Fentress, Cumberland and other counties.

Wartrace—Electric-power Plant.—The Wartrace & Lynchburg Railroad Co., recently incorporated, will erect an electric power-house.

Waverly—Flour Mill.—D. D. Collier contemplates the establishment of a 15 or 25-barrel roller flour mill; contract not awarded.

TEXAS.

Cameron—Cotton Mill.—Efforts are being made for the organization of a \$100,000 stock company to erect a cotton mill. Secretary Young Men's Business League may be addressed.

Cleburn—Grist Mill.—Cyrus Bros. will rebuild their grist mill and storage plant, recently burned; grist mill to have a capacity of twenty to thirty bushels per hour.*

Cleburne—Hardware.—Chartered: The Dickson Hardware & Furniture Co., with a capital stock of \$25,000, by E. Dickson, F. D. Dickson, E. Jameson and others.

Corsicana—Oil-land Development.—The Home Oil Co., to prospect for and develop petroleum, coal and other minerals, has been incorporated, with a capital stock of \$100,000, by R. Oliver, T. J. Oliver, P. C. Townsend and others.

Dallas—Drug Company.—The Patton-Worsham Drug Co., by E. G. Patton, W. J. Worsham and others; capital stock \$100,000.

El Paso—Vehicle Company.—The McIver-Patterson Vehicle Co. has been incorporated by W. R. McIver, E. M. Patterson and W. J. Batts, with a capital stock of \$15,000.

Fort Worth.—Chartered: Lewis & Co., with a capital stock of \$15,000, by Edward D. Levy and others.

Fort Worth—Plano Company.—The Henderson Plano Co. has been incorporated, with a capital stock of \$20,000, by J. C. Henderson of Ann Harbor, Mich.; S. M. Shelmire and J. W. Sturges of Fort Worth.

Galveston—Photo and Art Company.—Chartered: The Van Dyke Photo & Art Co., with a capital stock of \$4000, by Albert Richmond and others.

Luckenbach—Cotton Gin.—William Engel will rebuild his cotton gin, recently reported burned.*

Orange—Lumber Mill.—Alexander Gilmer will rebuild his lumber mill, lately reported burned.*

Plano—Electric Plant, Corn-shelling Plant, etc.—J. Stark & Co. will rebuild their corn-shelling plant, electric-light plant and power-house, reported burned at a loss of \$15,000.

San Antonio—Shoe Company.—Chartered: The Palace Shoe Co., with a capital stock of \$15,000, by Edward D. Levy, L. H. Finneberg, Jules Levy and others.

Sherman—Grain and Elevator Company.—Chartered: The Tom Bean Grain & Elevator Co., with a capital stock of \$5000, by W. R. Brents, W. O. Bracket and A. O. Bracket.

Taylor—Cotton Mill.—President J. H. Faubion of the Williamson County Farmers' Institute has called a meeting for October 18 to devise ways and means to erect a \$50,000 or \$75,000 cotton mill.

Terrell—Grain Mill.—The Terrell Milling

Co. will install grain-handling machinery, both for car and wagon wheat, corn and oats; also storage tanks.

Wharton—Electric-light Plant, Water Works, etc.—The Wharton Electric Light, Ice, Water Works & Cold Storage Co. has been incorporated, with an authorized capital of \$50,000, by G. C. Gifford, Edwin Hawes, Tom Brooks, R. B. Huston and others.

VIRGINIA.

Bristol—Pulp Mill.—The Columbian Paper Co., Thomas Bohanan of Philadelphia, Pa., president, and S. H. Egolf, general manager, has contracted for the erection of a \$400,000 pulp mill at Bristol to consume 360 cords of poplar per week; company has also pulp mill in operation at Buena Vista, Va.

Five Oaks—Paint Ores.—It is reported that a New Jersey company is developing paint ores at Five Oaks.

Martinsville—Saw Mill.—Henry Koehler & Co., Louisville, Ky., contemplate erecting a saw mill near Martinsville, as reported last week, but have made no definite arrangements.

Mineral City—Grist and Planing Mill.—W. H. Adams will erect a new grist and planing mill.*

Richmond—Paint Factory.—The Denney's Anti-Fouling Paint Co. has been incorporated for the manufacture of ready-made paint; officers, Thomas H. Denney, president; William H. Sterling, vice-president; Thomas D. Denney, secretary, and John T. Daniel, treasurer; capital stock \$15,000.

Richmond—Nail Factory.—The nail-making department of the Old Dominion Iron and Nail Works has resumed operations, employing 150 operatives.

Roanoke—Coal Mines, Coke Ovens, etc.—The Logan Consolidated Coal Co. (operating coal mines) will also manufacture coke, and the Logan Consolidated Coal & Coke Co. has been incorporated, with a capital stock of not less than \$100,000 nor more than \$300,000, to succeed the old company; Frank A. Hill, president; W. H. H. Dorney, secretary and treasurer.

Rural Retreat—Charcoal Furnace.—The Lobdell Car Wheel Co. of Wilmington, Del., will put its White Rock charcoal furnace at Rural Retreat in blast. Capt. J. H. Wissler will be manager of furnace; daily capacity nine tons.

Stafford C. H.—Bridge.—A wooden bridge will be constructed across Aquila run. Address C. A. Bryan, clerk board of supervisors.*

WEST VIRGINIA.

Alice—Flour Mill.—The Alice Roller Mill Co. will erect a new flour mill; contract not awarded.

Alfred—Flour Mill.—Jake Sillman contemplates erecting a new mill at the Three Forks of Reedy; contract for machinery not awarded.

Big Springs—Flour Mill.—W. C. Johnson & Sons will overhaul and improve their flour mill.

Central City—Electric-power Plant.—The Ohio Valley Electric Railway Co., recently incorporated, will erect an electric-power plant; L. T. Vinson, president, Huntington, W. Va.

Charleston—Molding Mill.—Landon, Kent & Co. are installing a band-saw mill with capacity of 30,000 feet per day.

Hambleton—Tannery.—The Otter Creek Boom & Lumber Co. will establish a tannery near Hambleton.

Kanawha—Electrical-Water-power Plant.—The Kanawha Electrical Co. has been granted franchise for a generating plant to utilize the power of the Kanawha river falls.

Milton—Oil, Gas and Coal Mining.—I. J. Hatshbarger, J. R. Burke, J. C. Reynolds and others have incorporated the Milton Oil, Gas & Mineral Co., with a capital stock of \$100,000.

New Martinsville—Electric-light Plant.—Mr. Sands of Wheeling and Jas. Chapman of New Martinsville, who were recently granted franchise for proposed electric-light plant, have completed plans for same.

Parkersburg—Oil Lands.—W. A. Tucker of Tucker, Anthony & Co. of Boston, Mass., will expend \$1,500,000 in the purchase and development of oil lands in West Virginia and Ohio.

Phillippi—Brick and Tile Works.—The Phillippi Tile & Brick Co. has been incorporated, with an authorized capital of \$50,000, by E. R. Dyer and W. D. Finn of Mansfield, W. Va.; E. D. Smith and M. F. Hatt of Phillippi and others.

Thurmond—Produce Company.—W. E. Connell and others have incorporated the Farm & Water Produce Co., with an authorized capital of \$500,000.

Wheeling-Oil and Gas Company.—The Wheeling Oil & Gas Co. has been incorporated, with an authorized capital of \$200,000, by A. F. Gasmlre, V. L. McCulloch, Lewis Huseman and others.

BURNED.

Bayard, W. Va.—Isaac McDaniel's saw mill; loss about \$10,000.

Branchville, Texas.—J. R. Thaxton's cotton gin; loss \$4000.

Cameron, Texas.—C. W. Sawyer's cotton gin.

Cordele, Ga.—G. H. Raines' cotton gin; estimated loss \$1000.

Hagerstown, Md.—The Greencastle Steam Laundry, Upton Easton & Son.

Hazlehurst, Ga.—T. B. Pace's saw mill.

Henrietta, Texas.—J. M. Butterworth's cotton gin; loss about \$3500.

Lynchburg, Texas.—Vaughn & Newton's cotton gin; estimated loss \$3500.

Marshall, Texas.—W. T. Ware's cotton gin; estimated loss \$5000.

Navo, Texas.—Sneathen Bros.' cotton gin; loss about \$4000.

New Boston, Texas.—H. B. Eubanks' Gln & Mill Co.'s plant; estimated loss \$6000.

New Boston, Texas.—New Boston Gln & Milling Co.'s cotton gin; loss about \$6000.

Newellton, La.—John Murdoch's cotton gin.

Plano, Texas.—J. Stark & Co.'s corn-shelling plant, electric-light plant and powerhouse; estimated loss \$15,000.

Point, Texas.—Harris & Son's cotton gin; loss about \$2500.

Rockdale, Texas.—F. Bredemier's cotton gin; estimated loss \$1800.

Texarkana, Texas.—Sprundell Lumber Co.'s saw mills; estimated loss \$15,000.

BUILDING NOTES.

Baltimore, Md.—Church.—Site has been purchased by the St. John's Methodist Church at \$12,900 for the erection of its church building, previously reported.

Baltimore, Md.—Dormitory.—Morgan College, Edmondson and Fulton avenues, will erect a dormitory.

Baltimore, Md.—Hotel.—George C. Haskell is preparing plans and a company will soon be formed for the erection of the large hotel and apartment-house previously reported to be erected at Eutaw Place, near Druid Hill Park. E. M. Noel will build the structure. Calvin Chestnut is interested.

Birmingham, Ala.—Hotel.—It is reported that J. A. Paine and W. C. Christy and others of Cincinnati, Ohio; Nashville (Tenn.) parties and local capitalists contemplate the erection of a \$250,000 hotel in Birmingham.

Charlotte, N. C.—School Building.—Contract has been awarded to Nicholas Ittner for the erection of three-story school building in ward 1 at \$27,000, which includes everything except heating and furnishing.

Charlotte, N. C.—Building.—Mrs. T. R. Robertson will erect building 45x65 feet.

Chattanooga, Tenn.—Warehouse and Elevator.—Chas. F. Hood will erect warehouse to cost \$1500, as reported last week, to be 47x130 feet; later on it will be enlarged and an elevator built in connection.

Columbia, S. C.—Residence.—Wilson & Edwards are preparing plans for \$2400 residence for J. B. Scott.

Crowley, La.—Warehouse.—James A. Petty completed plans for warehouse 132x148 feet for Crowley Mills.

Eagle Pass, Texas.—Warehouse.—The Mexican International Railway Co. will erect a brick warehouse 180x30 feet.

Fort Worth, Texas.—Dormitory.—The Masonic Widows and Orphans' Home will erect a dormitory to cost about \$8000.

Greenville, S. C.—Residence.—Wilson & Edwards of Columbia are preparing plans for \$4500 residence at Greenville for J. A. McCullough.

Houston, Texas.—Hotel.—The Hutchins House has been purchased for \$50,000 by Neuhaus Bros., and will be improved.

Kansas City, Mo.—Barns.—The Kansas City Stock Yards Co. will construct two large barns.

Lexington, Ky.—Tobacco Warehouse.—The Continental Tobacco Co. of New York city will erect a large tobacco warehouse at Lexington.

Louisville, Ky.—Store Building.—Kenneth McDonald has made plans for W. & J. Kleins for five-story store building 200x30 feet.

Louisville, Ky.—Factory Building.—J. J. Gaffney has made plans for factory building 75x225 feet, four stories, for Ahrens & Ott Manufacturing Co.

Morgantown, W. Va.—University Buildings.—Separate sealed proposals for a library, mechanical hall and an armory for the West Virginia University will be received at the office of Wilson Brothers & Co., architects and engineers, 1030 Drexel Building, Philadelphia, Pa., until October 31. Full information will be furnished (but only to general contractors) upon application to the architects and engineers.

Newport News, Va.—Business Block and Hotel.—D. S. Jones has awarded contract to Holtzclaw Bros. of Hampton for the erection of a four-story pressed-brick and brown-stone business building 96x50 feet to cost \$25,000; he will also erect another building in the rear to be used for hotel purposes. M. J. Dimmock prepared plans.

Norfolk, Va.—Hotel.—Charles C. Cassell of Baltimore, Md., has prepared plans for and work has been commenced on the erection of a four-story hotel 250 feet long, to be erected at Piney Beach at a cost of \$100,000.

Paducah, Ky.—Business Houses.—E. W. Smith awarded contract to Murray, Karnes & Chamolin for erection of two business houses to cost \$6000.

Richmond, Va.—Hospital.—The Charlotte Williams Hospital has been incorporated, with Robert S. Boshier, president; John L. Williams, vice-president; E. Randolph Williams, secretary, to build and conduct a hospital; building to be 160x155 feet.

Sextonville, Md.—Church.—The Methodist congregation will erect a \$2500 church. Address Rev. G. W. Hobbs, pastor.

Victoria, Texas.—City Hall.—J. H. Schneider, mayor, will receive sealed proposals until October 21 for \$7000 City Hall. Each proposal must be accompanied by a certified check for \$750.

Washington, D. C.—Hotel.—The Virginia Hotel Co. (reported last week as incorporated) will erect a new hotel on the site of the present Willard Hotel. Address Joseph E. Willard, Wyatt Building.

Washington, D. C.—Hotel Company.—The Iowa Apartment House Co. has been incorporated to operate hotels, with a capital stock of \$150,000; C. D. Waters, president.

Washington, D. C.—Buildings.—St. Aloysius Church is being improved at a cost of \$15,000; among improvements new electric-light fixtures will be introduced. Plans have been prepared for a new office building for Hamilton & Colbert, to be three stories, 20x90 feet. Plans have been completed for an apartment-house, three stories, 60x90 feet, to have all modern improvements. W. T. & B. F. Weaver will erect an apartment-house. Andrew Gleason will erect four dwellings, with bay fronts of press brick and Indiana limestone, to have all modern improvements. George L. Weaver will erect a dwelling, to be of frame and cost \$10,000. Oella Chappel will build six dwellings, two-story, press-brick fronts, Ohio stone trimmings, flat tin roof, furnace heat, cost \$18,000. Levi Woodbury will make repairs to hotel at a cost of \$20,000.

RAILROAD CONSTRUCTION.

Railways.

Aberdeen, N. C.—Messrs. A. C. Wilcox & Co., 332 Drexel Building, Philadelphia, Pa., advise the Manufacturers' Record that they are preparing plans to float bonds to extend the Moore County & Western Railroad, as proposed from its present terminus to Concord, N. C. The extension will be seventy miles in length, and the bond issue represents \$15,000 a mile.

Arkadelphia, Ark.—The company which recently purchased the Southwestern Arkansas & Indian Territory Railroad has decided to extend it about three miles to reach timber property which it owns. William Grayson of St. Louis is one of the principal officers.

Bainbridge, Ga.—The Georgia Pine Railway Co. is considering a proposition from the city of Tallahassee, Fla., to extend its railroad from Bainbridge to this point, a distance of forty-two miles. J. P. Williams of Savannah is president of the company.

Beaumont, Texas.—The last report concerning the extension of the Gulf, Beaumont & Northern Railroad is to the effect that contracts are now being let from Rogan, the present terminus, to Waskom, where it will connect with the Vicksburg, Shreveport & Pacific Railway. The extension will be about 135 miles in length, and pass through portions of Jasper, Sabine, Shelby and other counties in Northeastern Texas. About thirty miles of rail, it is reported, have been secured. John H. Kirby at Houston is president of the company.

Bentonville, Ark.—The Arkansas & Oklahoma Railroad Co. is building an extension to its present line from Southwest City, Mo.,

to Grand River, I. T., a distance of sixteen miles. This will make the total length of the line twenty-eight miles. J. M. Bayless at Bentonville is president.

Cape Girardeau, Mo.—An extension of the Missouri & Arkansas Railroad is being constructed between Commerce and Cape Girardeau, a distance of fifteen miles. L. B. Houck is president of the company.

Cartersville, Ga.—A report is current that the extension of the East & West Railway of Alabama is again being considered to Birmingham. The extension will be made from Pell City, the present terminus, and will be about thirty miles in length if built. Charles P. Ball at Cartersville is general manager.

Caruthersville, Mo.—It is announced that the St. Louis, Caruthersville & Memphis Railroad has been completed to Pocono, Mo., a distance of ten miles. Grading is now in progress on seventeen miles additional to Blythesville, Ark. Cunningham Bros. of Caruthersville are interested in the enterprise.

Chattanooga, Tenn.—The Memphis & Chattanooga Railroad Co. has been formed, with A. H. Chamberlain, president, and G. W. Ochs, secretary. This line is to be a branch of the Southern system, extending between Chattanooga and Stevenson, Ala., a distance of thirty-eight miles. W. H. Wells at Washington, D. C., is chief engineer of the company.

Chattanooga, Tenn.—J. W. Irwin has been appointed engineer to make surveys of the Missing Link Railroad being promoted by W. L. Albright of Chattanooga and others. The road is proposed from Chattanooga to Wauhatchie, S. C.

Clayton, Mo.—Lilburn G. McNair, representing the St. Louis, Clayton & Southwestern Railroad Association, has applied for a franchise to build an electric line in St. Louis county.

Coalburg, W. Va.—It is stated that J. Q. Dickinson, president of the Kanawha County Bank of Charleston, and C. W. Dillon of Fayetteville, W. Va., are interested in a company which proposes constructing an electric line from Coalburg to Mount Carbon, Fayette county, a distance of eighteen miles.

Columbia, Mo.—It is reported that the Missouri Midland Railroad has determined to build another extension of its line from Columbia to Fulton, also to Mokane. The extension will be twenty-five miles long.

Denison, Texas.—C. M. Points of Shawnee, Okla., president of the Shawnee & Indian Territory Railroad Co., is authority for the statement that this line is to be constructed from Wichita, Kans., to Denison, also to Texarkana, Ark., a total distance of 600 miles.

Fitzgerald, Ga.—It is reported that a loan of \$462,000 has been secured to extend the Waycross Air Line from its present terminus, Douglas, to Fitzgerald. The distance is about thirty-five miles.

Greensboro, N. C.—A report is current that the Seaboard Air Line contemplates having a branch to Greensboro by building from Pittsboro, a distance of forty miles. E. St. John at Portsmouth, Va., is vice-president of the company.

Hot Springs, Ark.—It is reported that P. J. Ledwidge and C. Donoghue of Hot Springs are interested in the Kansas City, Hot Springs & New Orleans Railroad Co., which is surveying a line from Hot Springs to Mansfield, Ark., where it will connect with the St. Louis & San Francisco system. The estimated distance is ninety miles.

Huntington, W. Va.—L. T. Vinson, secretary of the Ohio Valley & Eastern Railway Co., writes the Manufacturers' Record that this corporation has elected T. J. Bryan, president. The line will extend from Central City, W. Va., to Catlettsburg, Ky., a distance of eight miles. It will connect with the street-railway systems of the two towns, and will cross the Big Sandy river. It is expected that work will begin on the road about November 15.

Indianola, Miss.—The Indianola & Sunflower Central Railroad Co. has been incorporated by local parties to construct a line about fifty miles long in the Yazoo Delta territory.

Kingston, Tenn.—The Kingston Bridge & Railroad Co., recently formed, offers to construct a line from Kingston to a connection with the Tennessee Central Railroad if the town will vote \$25,000 in bonds in aid of the project.

Little Rock, Ark.—It is reported that engineers have begun a preliminary survey in the interest of the Choctaw & Memphis Railroad from its present western terminus to Albuquerque, N. M., where it will connect with the Atchison, Topeka & Santa Fe Railroad, completing an east and west route

from Memphis to the Pacific coast. Henry Wood at Little Rock, Ark., is vice-president of the company.

Lumberton, N. C.—About ten miles of the Carolina & Northern Railroad, in progress of construction from Lumberton to Marion, S. C., have been graded. This is the road which is being built by the Atlantic Seaboard Company, whose offices are located in the Bourse Building, Philadelphia.

Macon, Mo.—The latest report concerning the St. Louis, Iowa & Northern Railroad is to the effect that contracts will be let for a section of sixty miles in length to extend from Macon through Franklin county. R. S. Vivian, Portland Building, Chicago, is reported to be one of those interested.

Morgantown, N. C.—A report is current that a syndicate has been formed to build a railroad from Morgantown to a tract of timber land about eight miles from the town.

Mt. Pleasant, N. C.—The people in Cabarrus and Rowan counties have made a proposition to the Southern Railway Co. to give the right of way and grade for a branch line between Gold Hill and Mt. Pleasant if the railroad company will lay the track. The line will be about nine miles in length if built.

Nashville, Tenn.—A report is current that the Nashville, Chattanooga & St. Louis Railroad Co. has decided to build an extension to coal mines in the vicinity of Crossville, and has already surveyed the route. J. W. Thomas, Jr., is general manager of the company.

Norfolk, Va.—The electric line being constructed by the Norfolk & Atlantic Terminal Railway Co. will be completed by December 1 and ready for operation. This road is about ten miles in length. D. Lowenberg at Norfolk is president.

Oxford, N. C.—A correspondent of the Manufacturers' Record writes that A. W. Graham of Oxford is one of the principal promoters of the proposed railroad to connect Oxford with the Durham & Northern Railway. If built it will be about five miles in length.

Richmond, Va.—It is announced that engineers are to begin surveys from Richmond to a point in Gloucester county on the Chesapeake bay at once. This is the road being promoted by the Richmond & Tidewater Railroad Co., which has secured sufficient subscriptions to its capital, it is claimed, to begin construction work. Miles M. Martin at Richmond is one of the principal promoters of the enterprise.

Rocky Comfort, Ark.—The Arkansas & Choctaw Railroad has been completed from Ashdown to Choctaw City, Ark., a distance of twenty-two miles. It is expected to complete it to Ardmore, I. T., during the coming year. F. W. Valliant at Texarkana, Ark., is engineer.

Seaboard, Ala.—What is known as the Seaboard Railroad, it is stated, has been sold to parties who have determined to build an extension to the present line. S. T. Prince of Mobile is general manager at present.

Shelby, N. C.—The railroad under construction between Shelby and Lawndale will be completed about November 1. It is ten miles in length, and is being constructed by a company of which J. H. Schenck is president.

Shreveport, La.—The Shreveport & Red River Valley Railroad has been completed from Coushatta, La., a distance of thirty-six miles, and trains are now in operation. The total length of the line is seventy-three miles. P. McIlvried at Shreveport is manager of the company.

St. Louis, Mo.—S. M. Pickler of Kirksville, Mo., and F. C. Hills of Sioux City, Iowa, are promoters of the St. Louis, Iowa & Dakota Railroad Co., formed to construct a line from Sioux City to St. Louis.

Tifton, Ga.—President H. M. Atkinson of the Union Lumber Co. of Atlanta, which is constructing the Tifton, Thomasville & Gulf Railroad, writes the Manufacturers' Record that the company is considering the proposed extension to Tallahassee, Fla., but as yet has reached no decision in the matter. The road is nearly completed from Tifton to Moultrie. The track is laid with 60-pound steel rails.

Waco, Texas.—About ten miles of the extension of the Texas Central Railroad has been completed and a considerable mileage graded in addition. Charles Hamilton at Waco is general manager of the company.

Wartrace, Tenn.—The plan to construct a railroad between Wartrace and Lynchburg has resulted in the incorporation of a company under this title capitalized at \$175,000. The incorporators include H. H. Evans and S. H. Case of Chicago. Davidson & Co. of Wartrace are also interested.

Washington, D. C.—The company constructing the electric railway between Washington and Rockville has completed it to within a few miles of Rockville, and it is understood may extend it five miles to Gaithersburg. It is calculated to have the road in operation between Washington and Rockville by December 1.

Weaverville, N. C.—The town of Weaverville is reported to have voted in favor of issuing \$10,000 in bonds to construct an electric railroad between Asheville and Weaverville, a distance of ten miles. The mayor will give further information.

Street Railways.

Biloxi, Miss.—The plan to build an electric railroad in the town and suburbs has been revived by T. H. Warren and others. It is calculated to purchase the electric-light plant, also the street railroad now in operation, and combine them.

Charlotte, N. C.—P. N. Brown has been elected president of the City & Suburban Electric Co., and it is stated that work will begin upon the lines projected by it during the next year.

Chattanooga, Tenn.—A local company is being formed to build an electric railroad from the center of the city to Walden's Ridge, in the suburbs.

Columbia, S. C.—The Columbia Street Railway Co. has been granted permission by the city council to build several extensions to its electric line in the city and suburbs. The extensions will be in two different directions. W. B. Smith Whaley is president of the company.

Danville, Va.—John F. Reson is president of the Danville Street Car Co., which, it is announced, proposes beginning work upon the new electric line in the near future.

Greenville, S. C.—The Greenville Traction Co. has organized by electing Joseph S. Keen, president; George M. Bunting, vice-president, and James H. Davis, general manager. The company is principally composed of Philadelphia parties, and is capitalized at \$200,000. It announces that it intends constructing about five miles of line in the city and suburbs. W. C. Cothran at Greenville is acting as attorney for the company.

Meridian, Miss.—The latest plan relative to the street-railway and electric-light improvements is a proposition from S. T. Carnes of Memphis, Tenn., who offers to rebuild the railway system, also to install the necessary machinery, power-house and to furnish an electric-light system, if granted certain franchises by the city authorities.

New Orleans, La.—Arrangements have been made to construct the proposed electric line from the city into St. Bernard parish, reaching Port Chalmette.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Bakery Machinery.—See "Cracker Machinery."

Bleachery.—Union Manufacturing Co., Samuel H. Sibley, president, Union Point, Ga., is considering installing bleachery and dyeing plant.

Blower.—Thomas H. Johnson, Chattanooga, Tenn., wants to buy second-hand No. 7 (Root) blower.

Boiler.—See "Hoisting Equipment."

Boiler.—John D. Marlin, Dawson, Ga., wants to buy a 75-horse-power boiler.

Boiler and Engine.—See "Mining Equipment."

Boiler and Engine.—Joseph A. Nichols, Florence, Ala., wants a second-hand engine and boiler, twenty horse-power.

Boiler and Engine.—F. S. Hoog, General Delivery, McKeesport, Pa., wants a 125-horse-power boiler and engine, new or second-hand.

Boiler and Engine.—T. J. Finch & Bro., Thomasville, N. C., are in the market for a second-hand 15-horse-power portable engine and boiler.

Bridge.—Proposals will be received for the construction of a wooden bridge across Aquila run and the abutments thereto until October 23. Specifications will be furnished by C. A. Bryan, clerk board of supervisors, Stafford C. H., Va. Usual rights reserved.

Canning Machinery.—K. G. Faegre, secretary Colorado Land & Improvement Association, Thorsby, Ala., wants to correspond with manufacturers of canning machinery.

Cold-storage-plant Supplies.—Lynchburg Diamond Ice Factory, Lynchburg, Va., wants quotations on granulated cork for insulating cold-storage and information as to weight of same per cubic foot.

Concentrating Plant.—See "Mining Equipment."

Cornmeal Mill.—Cane Creek Mill Co., Pleasantville, Tenn., is in the market for second-hand cornmeal outfit; capacity 100 bushels per day.

Cotton Ginnery.—William Engel, Luckenbach, Texas, wants three ginsstands, elevator, distributor, double-box self-packing press, pulleys and shafting.

Cotton Mill.—W. H. Cook, 345 Carondelet street, New Orleans, La., wants to correspond with manufacturers of cotton-mill machinery.

Cracker Machinery.—A. G. & R. F. Warren, Wilmington, N. C., want to correspond with a cracker-machine manufacturer.

Drilling.—M. M. Malcolm, Fayetteville, Va., wants to purchase second-hand (Star & Key) stone-drilling outfit, mounted complete with five horse-power.

Dyeing Equipment.—See "Bleachery."

Electrical Machinery.—See "Engines, etc."

Electric-light Plant.—Huston Biscuit Co., Birmingham, Ala., is in the market for a 50-incandescent-light plant, engine and dynamo.

Electric-light Plant.—R. N. Miller, Hazlehurst, Miss., wants estimates on thirty-five feet and forty feet cedar poles in car lots; water wheel that will develop ninety or 100 horse-power; electrical machinery and wire.

Electrical Machinery.—Andrew J. Howell, Jr., Box 32, Wilmington, Del., wants to correspond with manufacturers relative to the establishment of an electrical-supply house.

Engine.—W. H. Adams, Mineral City, Va., is in the market for engine, probably for grist and planing mill.

Engine.—Thomas McGinn, Stella, N. C., wants to communicate with dealers in second-hand marine engines; wants a surface condenser for a 12x12-inch engine.

Engine.—See "Electric-light Plant."

Engine.—See "Hoisting Equipment."

Engines.—J. W. Miner, Ronda, N. C., wants quotations on second-hand (Priestman) oil engines, ten or fifteen horse-power.

Engines, etc.—Sealed proposals will be received at the U. S. Engineer Office, Tampa, Fla., until October 25 for oil engine, storage batteries and dynamos. Information furnished on application; Henry Jervey, captain, engineers.

Flour Mill.—G. R. Ramsey, Cedartown, Ga., wants to purchase machinery for 20-barrel roller flour mill; already has power and cleaning machinery.

Flour Mill.—W. C. Crosby, Huntsville, N. C., wants to correspond with manufacturers relative to establishing a 20-barrel roller flour mill.

Flour Mill.—Cheek & Hall, Lillards Mills, Tenn., want estimates on a 40 or 50-barrel flour mill.

Furniture.—The West Virginia Colored Institute, Charleston, W. Va., will purchase \$3500 worth of furniture; S. R. Hanen, president.

Grist Mill.—Cyrus Bros., Cleburne, Texas, need grist mill with capacity of twenty to thirty bushels per hour and oat-clipper capacity 500 to 600 bushels per hour.

Grist Mill.—W. H. Adams, Mineral City, Va., wants to purchase grist mill.

Heating Apparatus.—The West Virginia Colored Institute, Charleston, W. Va., will buy heating apparatus to cost not more than \$3000; S. R. Hanen, president.

Hoisting Equipment.—Western Elevator Co., Tuscaloosa, Ala., wants one hoisting engine, single or double drum and cylinder, suitable for derrick purposes, to hoist 2000 to 3000 pounds; one boiler suitable for above engine; one complete set of derrick irons. Quote f. o. b. prices, giving point of shipment and full information.

Ice Factory.—Robert Matthews, Caixa 5177, Para, Brazil, South America, wants estimates on cost of complete ice factory to supply town of 75,000 inhabitants.

Laundry Equipment.—Robert Matthews, Caixa 5177, Para, Brazil, South America,

wants estimates on complete steam-laundry equipment for town of 125,000 inhabitants.

Laundry Machinery.—Walter McMillan, Red Springs, N. C., wants prices on machinery for steam laundry.

Machine Tools.—J. A. Carlisle & Son, Crowley, La., are in the market for a second-hand small planer or large shaper and bolt machine.

Machine Tools.—Hardie-Tynes Foundry & Machine Co., Birmingham, Ala., is in the market for a fast-running planer about thirty-six inches; also good lathe from 22 to 28-inch swing, six to eight-foot centers, fitted with turret attachment; also second-hand steam hammer 10,000 to 12,000 pounds.

Machine Tools.—G. M. Davis & Son, Palatka, Fla., are in the market for a lever or screw punch to punch one-quarter-inch and three-eighths-inch holes in iron three-sixteenths inch thick.

Machine Tools.—M. F. Williams & Co., 2701 North Broadway, St. Louis, Mo., want a large-size punch and shear, either single or double.

Marine Engine.—See "Engine."

Mining Equipment.—Clara Louise Zinc Mining Co., C. E. Granniss, president, Kansas City, Mo., wants to purchase a second-hand mill with capacity of concentrating 100 tons of ore per day, including crushers, rolls, jigs, boilers, engines, etc.

Oat-clipper.—See "Grist Mill."

Oil Engines.—See "Engines."

Piping.—Jas. Thompson, Waltham, S. C., wants 1200 feet one-inch pipe.

Planing Mill.—W. H. Adams, Mineral City, Va., wants to purchase planing mill.

Pulleys and Shafting.—See "Cotton Ginnery."

Railway Equipment.—W. T. Carter & Bro., Camden, Texas, are in the market for a 30-ton standard-gauge locomotive with six drivers, and about one mile of 30-pound steel rails with fastenings complete.

Railway Equipment.—"H. B. & C.," care of Manufacturers' Record, Baltimore, Md., are in the market for 20 to 30-ton locomotive,

also a 36-inch gauge 18-ton saddle-tank switcher and a 30-inch 12 or 15-ton saddle-tank switcher.

Railway Equipment.—W. M. Absher Co., North Wilkesboro, N. C., wants a small lot of second-hand small T iron rails for dry-kilns.

Rice-mill Machinery.—Leland J. Henderson, Bay St. Louis, Miss., wants information regarding machinery for rice mills.

Saw Mill.—Alexander Gilmer, Orange, Texas, will probably require machinery for a band mill complete.

Saw Mill.—Sumter Telephone Manufacturing Co., F. C. Manning, secretary, Sumter, S. C., is in the market for a small band-saw mill.

Shingle Mill.—See "Woodworking Machinery."

Street Improvements.—Proposals will be received until October 21 by J. H. Schneider, mayor, Victoria, Texas, for \$7000 worth of street improvements. Each proposal must be accompanied by a certified check for \$750.

Sugar-mill Machinery.—Leland J. Henderson, Bay St. Louis, Miss., wants information regarding sugar-cane grinding.

Water Wheel.—See "Electric-light Plant."

Woodworking Machinery.—T. J. Finch & Bro., Thomasville, N. C., are in the market for a second-hand resawing machine for cutting, sidings, etc.

Woodworking Machinery.—Jas. Thompson, Waltham, S. C., wants a second-hand 24-inch self-centering resaw.

Woodworking Machinery.—The Piedmont Lumber Co., Charlotte, N. C., wants prices on two saw plastering lath mills and single-block shingle saw; send illustrations and state price.

Woodworking Machinery.—Satilla Manufacturing Co., Waycross, Ga., will be in the market for considerable machinery for manufacture of sash, doors and blinds.

Woodworking Machinery.—Leland J. Henderson, Bay St. Louis, Miss., wants information regarding sash, door, blind machinery and shingle-mill machinery.

NASHVILLE, CHATTANOOGA & ST. LOUIS RAILWAY.

FORTY-EIGHTH ANNUAL REPORT FOR THE YEAR ENDING JUNE 30, 1899.

Nashville, Tenn., September 1, 1899.

To the Stockholders:

The Forty-eighth Annual Report of the President and Directors of the Nashville, Chattanooga & St. Louis Railway for the fiscal year ending June 30, 1899, is herewith submitted:

MILES OF ROAD OPERATED.

Main Line.....	320.21
McMinnville.....	69.54
Fayetteville & Columbia.....	86.47
Huntsville & Gadsden.....	80.21
Lebanon.....	20.21
Tracy City.....	20.73
Squatchie Valley.....	63.13
Centerville.....	65.94
Shelbyville.....	8.01
West Nashville.....	6.26
Rome Railroad.....	18.15
Western & Atlantic Railroad (Leased).....	136.82
Middle Tennessee & Alabama Railroad.....	30.44
Total.....	935.12

To this should be added:

Mileage of Paducah & Memphis Division, the operations of which are kept separate.. 254.20

Making the total mileage..... 1189.32

Which is located in the following States:

Tennessee.....	875.30
Alabama.....	114.48
Georgia.....	142.25
Kentucky.....	57.29
Total.....	1189.32

FINANCIAL

The Bonded Debt as per last report was.....\$15,996,000 00

There have been redeemed:

Tracy City Branch Six Per Cent. Bonds..... 20,000 00

First Consolidated Mortgage Five Per Cent. bonds have been issued:

In lieu of Tracy City Branch Bonds redeemed..... 20,000 00

Leaving the Bonded Indebtedness this date.....\$15,996,000 00

GENERAL RESULTS.

(935 Miles.)

Earnings.

From Freight Traffic.....	\$4,275,000 25
From Passenger Traffic.....	1,425,288 65
From Transportation of Mails.....	174,590 00
From Express Traffic.....	72,722 33
From Miscellaneous Sources.....	134,056 31
Total Earnings.....	\$6,081,760 00

Expenses.

For Conducting Transportation.....	\$2,531,043 52
For Maintenance of Way and Structures.....	900,397 67
For Maintenance of Equipment.....	472,418 24
For General Expenses.....	195,846 66

Total Operating Expenses (67.41 per cent.)..... 4,099,706 00

Net Earnings from Traffic (32.59 per cent.).....\$1,982,054 00

To which add:	
Income from Investments.....	30,481 59
Net Earnings from Traffic and Other Sources.....	\$2,012,541 55
From which deduct:	
Interest on Bonded Debt.....	\$948,055 00
All other Interest.....	78,743 09
Taxes.....	178,592 08
Rentals.....	422,268 00
Twenty-six W. & A. Income Bonds Retired.....	26,000 00
Loss on Paducah & Memphis Division.....	4,346 93
Proportion of Uncollectible Accounts Accruing this Year.....	2,000 00
	1,058,005 70
Net Income.....	\$354,535 85
Dividend, 1 per cent. paid.....	90,990 91
Balance transferred to Profit and Loss Account.....	\$254,535 94

Growth of Traffic.

The growth of traffic for the past twenty-one years is shown by the following table:

Fiscal year.	Miles operated.	Gross earnings.	Earnings per mile.
1878-79.....	453	\$1,736,723 86	\$3,829 60
1879-80.....	453	2,099,155 07	4,628 78
1880-81.....	508	2,256,186 11	4,441 31
1881-82.....	539	2,074,582 70	4,848 94
1882-83.....	554	2,283,522 61	4,121 88
1883-84.....	554	2,372,086 46	4,281 74
1884-85.....	580	2,240,718 98	3,863 30
1885-86.....	580	2,188,109 74	3,772 59
1886-87.....	600	2,774,247 99	4,623 74
1887-88.....	650	3,091,653 49	4,756 39
1888-89.....	652	3,300,165 17	5,077 17
1889-90.....	652	3,550,461 42	5,445 49
1890-91.....	652	3,943,303 74	6,048 01
1891-92.....	810	5,353,258 06	6,609 00
1892-93.....	810	5,131,779 24	6,335 53
1893-94.....	884	4,521,661 85	5,109 22
1894-95.....	902	4,608,501 88	5,109 20
1895-96.....	905	5,074,625 45	5,625 97
1896-97.....	905	5,116,118 44	5,658 77
1897-98.....	905	5,646,548 89	6,239 28
1898-99.....	935	6,081,766 05	6,504 56

IMPROVEMENT ACCOUNT.

The following expenditures made during the year for construction, new equipment, improvements and additions to property have been charged to Cost of Road:

Seven Hundred Freight Cars.....	\$317,907 35
Three Postal Cars.....	15,169 50
Air Brakes on 1427 Cars.....	79,326 93
Automatic Couplers on 1441 Cars.....	33,128 59
Middle Tennessee & Alabama Railroad.....	59,021 99
New Shops at Nashville.....	6,339 12
Hickman Extension.....	7,144 03
Hickman Depot Grounds.....	5,100 00
Hickman Wharf Boat.....	1,629 30
New Side Tracks.....	6,793 85
Filling Trestles.....	10,880 89
Total.....	\$542,441 56

The earnings and expenses per mile for the past four years have been.

	1895-96.	1896-97.	1897-98.	1898-99.
Gross Earnings.....	\$5,625 97	\$5,658 77	\$6,239 28	\$6,504 56
Operating Expenses.....	3,508 15	3,544 60	4,048 42	4,384 71
Net Earnings.....	\$2,117 82	\$2,114 17	\$2,190 86	\$2,119 85

The Operating Expenses have been increased \$183,983.78 on account of restoring the reduction in wages made in 1893, and \$100,719.85 on account of betterments included in Operating Expenses which have heretofore been charged to Cost of Road.

The train mileage for the year was:

Passenger.....	1,346,176
Freight.....	2,836,496
Mixed.....	369,175
Construction.....	112,121
Switching.....	1,023,850
Total.....	5,687,818

The earnings per train mile were:

Freight.....	\$1 51
Passenger.....	1 05

EQUIPMENT.

The Company owns 166 locomotives, all of which are in running order; 99 were thoroughly overhauled, 44 repaired, 21 equipped with electric headlights and 74 with M. C. B. couplers. There are now 157 engines equipped with train brakes and 76 with automatic couplers.

The engine mileage was 5,687,818, against 5,456,255 for the preceding year.

The cost per train mile has been:

	Cents.
For repairs.....	2.49
For engine and roundhouse men.....	7.38
For water supply.....	.61
For stores.....	.51
For fuel.....	8.16
Total.....	19.15

Cars.

The passenger equipment consists of:	
Passenger coaches.....	113
Baggage cars.....	35
Postal cars.....	13
	161

Freight equipment:

Box cars.....	2,821
Coal cars.....	1,105
Flat cars.....	688
Stock cars.....	104
Coke cars.....	206
Ore cars.....	50
Gravel cars.....	71
Cabooses.....	197
	5,240

Other cars:

Pay car.....	1
Wrecking cars.....	3
Pile-driver.....	1
Cook cars.....	2
Derrick cars.....	3
Tool cars.....	8
Air-brake car.....	1
	19
Grand total.....	5,420

Sixty-four coaches, 17 baggage, 6 postal cars and 1923 freight cars were repaired, and 76 freight cars rebuilt; 150 new freight cars were built and 550 purchased, increasing the freight equipment 700 cars.

Of the 5240 freight cars, 2702 are now equipped with air brakes and automatic couplers, leaving 2538 to be equipped, which will cost \$190,350.

MARINE EQUIPMENT.

The Company owns the following equipment, which is used on the Tennessee river, between Hobbs Island and Gunterville, Ala., a distance of twenty miles:

Steamer "Huntsville."
Steamer "Hattie McDaniel."
Two Transfer Barges.

ROAD DEPARTMENT.

The total mileage of main and side lines is as follows:

	Main Line.	Side Line.
Miles owned.....	798.30	169.21
Miles leased.....	391.02	86.41
	1,189.32	255.62

There was laid on Nashville Division .74 mile, on the Chattanooga Division 16.17 miles and on Atlanta Division 9.73 miles of new 68-pound steel rail. The old rail taken up has been used in laying second tracks, branch lines and sidings.

The total mileage of steel and iron rail is shown in tables below:

Mileage in Steel.								
Divisions.	68 lbs.	60 lbs.	58 lbs.	56 lbs.	52 lbs.	40 lbs.	38 lbs.	Total.
Chattanooga	147.07		4.08					151.15
Nashville	2.57		148.02	14.00	3.48			168.06
Atlanta	128.01			8.81				136.82
Rome				18.15				18.15
Lebanon			29.21					29.21
Shelbyville82	.22	1.90			2.04
McMinnville97	6.94	31.01		29.80			68.82
Columbia			4.28		82.03			86.34
Huntsville			53.01		26.93			79.94
Tracy City	5.60		13.66		1.47			20.73
Jasper			31.02		31.09			62.11
Centerville			23.74	9.83		12.42	8.68	54.67
West Nashville			3.06	.82				4.78
Middle Tenn. & Alabama				30.44				30.44
Paducah & Memphis		118.60		135.90				254.20
Total	284.22	125.54	343.71	217.06	175.93	12.42	8.68	1,168.46

		Mileage in Iron.				Total.
Divisions.		56 lbs.	50 lbs.	40 lbs.		
Shelbyville.....		5.97				5.97
McMinnville.....		.72				.72
Columbia.....		.13				.13
Huntsville.....		.27				.27
Jasper.....		1.02				1.02
Centerville.....		1.14		10.13		11.27
West Nashville.....		1.48				1.48
Total.....		7.11	3.62	10.13		20.86

ROADWAY.

There were 415,064 crossties and 209 sets of switch-ties used in renewal, and 24,913 crossties and 37 sets of switch-ties used in improvements.

There were 7.91 miles of new side track constructed, 1.67 miles previously constructed as temporary, but since made permanent, and 1.14 miles were torn up, leaving a net increase of 8.44 miles.

There were 81,716 cubic yards of ballast put in the track.

BRIDGES AND TRESTLES.

The following table shows the length and different classes of bridges and trestles:

Divisions.	Total length of iron bridges.		Cedar piles.		Oak piles.		Frame.		Totals pile and frame.		Grand total.
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	
Chattanooga.....	7,007	8	4,238	6			227	0	4,465	6	11,473 12
Nashville.....	3,814	0	24,635	11			122	0	24,757	11	28,571 11
Atlanta.....	4,142	9	2,353	8	120	0	295	10	2,769	6	6,912 3
Rome.....			1,173	0			38	0	1,211	0	1,211 0
Lebanon.....	1,033	6	397	0			51	0	448	0	1,481 6
McMinnville.....	1,925	8	3,379	8			182	6	3,562	2	5,487 10
Columbia.....	1,061	8	2,961	1			740	10	3,701	11	4,763 7
Middle Tenn. & Alabama.....	336	0			1,252	0	2,184	0	3,436	0	3,772 0
Huntsville.....	1,622	4	5,592	11	2,348	0	2,560	2	10,501	1	12,123 5
Tracy City.....	26	0									26 0
Jasper.....	829	10	7,771	0			40	0	7,811	0	8,640 10
Centerville.....	2,609	1	7,925	0	449	0	92	6	8,466	6	11,075 7
West Nashville.....			648	0					648	0	648 0
Shelbyville.....	126	0	548	0					548	0	674 0
Total.....	24,534	6	61,023	9	4,169	0	6,533	10	72,326	7	96,861 1

New iron bridges were constructed on Chattanooga Division at Dillon's creek and Narrow's trestle, and on the Nashville Division over two branches and two roads on Belle Meade Farm, and three crossings of two spans each over Harpeth river, a total of 691 feet.

The work of repairing and enlarging culverts on the Chattanooga Division has been continued and several substantial improvements made. This work is also in progress on the Nashville and Atlanta divisions.

Four thousand six hundred and seventy-five feet of trestle work have been filled; 694 lineal feet of cedar-pile trestle built, replacing other structures; 205 feet of cedar-pile trestles built new; 55,134 lineal feet of cedar piles have been driven, and 10,874 feet of trestle deck renewed.

BUILDINGS.

On the night of January 3, 1899, the paint shop at Nashville, 92x300 feet, was burned. This has been rebuilt, and in addition a tin and copper shop, 42x62 feet, was constructed, and the blacksmith shop extended 52x74 feet.

There have also been constructed new depots at Paducah Junction, Kasserman, Jeff and Fayetteville; section-houses at Short Switch and Shuck Switch; a new warehouse at Huntsville; the warehouse at Hickman has been remodeled. A new brick passenger depot has been erected at Marietta, a frame passenger depot at Dalton, and the old depots at Graysville and Emerson remodeled. A large amount of work was done remodeling the offices of the Traffic Department at Nashville, and the freight-house at Chattanooga has been extended 112 feet.

MIDDLE TENNESSEE & ALABAMA RAILROAD.

The Middle Tennessee & Alabama Railroad has been extended 4.18 miles from Jeff to the Limestone county line, and will be completed by October 1 a further distance of 2.03 miles to Limestone creek, which is 36.6 miles from Fayetteville and 13.8 miles from the junction of the Louisville & Nashville Railroad and the Southern Railway near Decatur, Ala.

AUDIT OF ACCOUNTS.

It has been the custom of a number of leading railroads to have their annual statements audited by public accountants, and, after consideration, it has been deemed to the best interest of this Company to have its accounts audited annually. The work has been done this year by the Audit Company of New York, and the certificate of that company, showing the result of the examination, is attached to this report.

The Board of Directors desire to express their pleasure at the harmonious relations which have been maintained with connecting and competing lines, and their appreciation of the faithful and intelligent service rendered by the officers and employees.

J. W. THOMAS, President.

FLORIDA TIMBER LANDS.

Development of Lumber and Turpentine Industries.

[Special Cor. Manufacturers' Record.]

Ocala, Fla., October 16.

The Florida Land Co., Limited, of Jacksonville, managed by W. M. Angus of Jacksonville, has disposed of 60,000 acres of pine timber lands at \$2 an acre in this (Marion) county, principally in the vicinity of Dunnellon, to Messrs. Byrds of South Carolina, Mr. Kroth of Valdosta, Ga., and Messrs. Maloy & West of Summerfield, Fla. The company will put up a number of big turpentine stills on different parts of the land, and when in operation will ship their product via the Dunnellon Company's new railroad to the Withlacoochee river, and thence by vessel to market. It is thought that the company's headquarters will be in Dunnellon. The company selling the land reserves the title to all phosphate that may be hereafter discovered on it.

A mammoth saw mill to cut pine and cypress lumber and shingles and to cost about \$50,000 is soon to be erected forty miles west of here, at the head of Crystal river. The company will build a tramroad into the lumber. The most modern machinery will be put in, and the capacity of the mill will be 50,000 to 60,000 feet per day and will employ about seventy-five men. The company will have the advantage of both rail and water transportation. N. Barco, a practical lumber man, and R. J. Knight, one of the most extensive naval-stores operators of the State, are those principally interested.

The Ocala Board of Trade, D. S. Williams, secretary, is endeavoring to locate a factory here to manufacture starch from cassava root, which grows very prolifically in the Florida soil. A factory of this kind is being operated very successfully at Deland, and the people feel very much encouraged over the prospects of securing one for Ocala.

The Florida Supply Plant, for the manufacture of hardwoods into spokes, rims, etc., is almost ready for operations at Fairfield, in this county. The engine and boilers are in place. They are forty horse-power each. The company will employ about forty men, and has purchased large quantities of hickory and other hardwoods from the owners. The plant similar to this, referred to some time ago to be erected in Ocala, is now an assured thing. Mr. Regan, the manager, is purchasing the ground on which to build. As the industry is a new one for Florida, and this class of wood very plentiful, the prices paid for timber are very low.

There are now seventy-eight hard-rock high-grade phosphate mines in operation in Florida, besides the mines now being opened, those mining low-grade or soft rock, and the pebble mines in the southern part of the State.

John T. Dale of Chicago, owner of the Cove Bend Phosphate Co.'s property in Citrus county, has leased the lands to J. H. Martin of Newberry, and expects to put in two large plants at once and mine the property.

L. Taylor, general manager and treasurer of the Portland Phosphate Co. of Albion, has returned from Portland and expects to begin active mining operations on the company's lands at once.

George Mackay, a contractor of Ocala, is erecting a plant at Juliette for the Florida Syndicate, one at Hartshorn and one at Newberry for J. Buttgenbach, and another at Phosphoria for the Phosphoria Company, Limited.

Edward Holders' new phosphate plant at Cordele was completed on September 20, and mining operations have begun. Mr. Bassett is the superintendent.

The Pattens Mining Co., near Morriston, is constructing a phosphate plant.

Messrs. Heyward & Brevton at Early Bird are building an extensive plant.

Hazzard & Chapman are building a new plant at Juliette.

Faix & Hiller are erecting another plant at Early Bird.

TRADE NOTES.

A Ball Engine.—The machinery and electrical department of the United States Commission to the Paris Exposition has purchased from the Ball Engine Co., Erie, Pa., a 350-horse-power tandem compound engine, arranged for direct connection to a Bullock generator, to be used as a working exhibit in the machinery annex at Vincennes.

Gyrator Flour Mill.—Contracts received last week by the Wolf Company of Chambersburg, Pa., for flour-mill equipments included a complete 60-barrel plant in Oklahoma, remodeling 75-barrel mill in Pennsylvania, complete 50-barrel mill in Delaware, new 150-barrel mill in Indiana and 40-barrel mill in Tennessee.

Boilers, Engines and Heater.—It frequently happens that an establishment enlarging or otherwise improving its equipment is enabled to offer good second-hand machinery at low prices. In this connection attention is called to the offering of the Cumberland Mills of Nashville, Tenn. The company has a 250-horse-power heater, a Corliss cross-compound engine and three steel boilers for sale. (See advertisement.)

Bronze Grill Work.—The offices of the South Texas National Bank at Houston have been greatly improved lately, and are now said to constitute the finest of their kind in the Southwest. The electro-bronze grill work furnished for the banking apartments is very handsome, and arranged so that utility is served to the utmost. The grill work was furnished by the J. E. Bolles Iron and Wire Works of Detroit, Mich.

Oil Mill and Ginnery.—The present market conditions for cottonseed oil and cotton are of such a nature as to make attractive any opportunity offered to engage in their handling. Such an opportunity is given by Mr. W. N. Parsons of Hawkinsville, Ga. He is desirous of selling a 20-ton oil mill and an 80-bale ginnery, the entire equipment being in good order and now operating. Address for particulars (see advertisement).

"New Era" Gas Engines.—The New Era Iron Works Co. of Dayton, Ohio, manufacturer of the famous "New Era" gas and gasoline engines, has recently purchased a new plant, which is now being remodeled and equipped with all the latest improved machinery. The demand for the "New Era" has been such as to compel this action, and by January 1 the company's capacity will be doubled, and it will have one of the finest gas-engine factories in the United States.

Anent Boiler-Cleaning.—The Union Boiler Tube Cleaner Co. of 237 Penn avenue, Pittsburgh, Pa., has recently finished the largest contract ever awarded for cleaning boilers, being for twenty-two water-tube boilers, containing an aggregate of ten miles of four-inch tubes—a task, it is claimed, no other concern has the equipment to accomplish. The company has just shipped its eighth machine to England and Scotland. The initial machine for export had been shipped just one year previously. One of the latter was repeat of the first order.

For Steam Users.—Steam users are presumed as on the lookout for any improvement that adds to the efficiency and economy attainable in the operation of steam plants. One of the recent devices that is rapidly gaining a large clientele is the Burrows automatic steam-pump regulator and low-water alarm. This device has many especial features of merit, particulars of which may be had by requesting the manufacturer for literature concerning it. This manufacturer is the Burrows Manufacturing Co. of 143 W. Third street, Williamsport, Pa. Those who have used the Burrows regulator speak in highest terms of its merits. A recent letter from a Missouri flour-milling company says: "Water line in boilers does not vary a half inch, nor do our engineers have to pay any attention to the steam supply to pump from the time they come on duty until they leave, and not then, as the regulator does the work much better even than they could." "Had it not been for installing this device," the company continues, "we would probably be still pumping away in the 'good old-fashioned way' and using about ten more bushels of coal per hour than we are doing now."

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Condition of Georgia Banks.

The annual report of the condition of the State banks of Georgia shows that during the year under consideration not one failure was recorded of the 139 in operation. In addition to declaring dividends ranging from 6 per cent. upwards, the majority of the institutions have accumulated a considerable surplus during the same period.

New Corporations.

C. Campbell of Stockdale, Texas, has determined to open a bank at Moulton, Texas.

The bank being organized at Elba, Ala., will open for business early in November. James Murphree of Troy, Ala., is one of the principal stockholders.

The Citizens' Savings Bank, recently organized at Durham, N. C., has opened for business, with Mr. Julian S. Carr, president, and W. H. Oakley, cashier.

New Securities.

The Maryland Biscuit Co. of Baltimore has determined to increase its stock to the extent of \$50,000.

Messrs. Stafford & Co. of Cleveland, Ohio, have purchased \$25,000 worth of bonds of Kinston, N. C., paying 104.10.

It is reported that the town of Weaver, N. C., has decided to issue \$10,000 in bonds in aid of an electric railroad. The town clerk may be addressed.

Local investors have purchased \$20,000 worth of courthouse bonds issued by Upshur county, West Virginia. The bonds sold at a premium of about \$1000.

Bids will be received until October 21 for the issue of \$14,000 in 5 per cent. bonds to be sold by the city of Victoria, Texas. J. H. Schneider is treasurer.

The Chesapeake & Potomac Telephone Co. of Washington has determined to issue \$1,500,000 in 5 per cent. bonds for refunding purposes; also for improvements.

New York, Cincinnati and Chicago parties were among the bidders at the recent sale of bonds of the town of Berkeley, Va. They amounted to \$25,000 at 5 per cent. The highest bid was at a premium of \$1437.

The question of refunding the debt of Floyd county, Georgia, is now being discussed, and there is a possibility that a bond issue may be floated at between 3½ and 4 per cent. R. G. Clark of Rome, Ga., is among those interested.

Dividends and Interest.

The Canton Company of Baltimore has declared a dividend of fifty cents a share.

The St. Charles Street Railroad Co. of New Orleans has declared a quarterly dividend of 1¼ per cent.

The New Orleans & Carrollton Railroad Co. of New Orleans has declared a quarterly dividend of \$1.50 per share.

The Citizens' Bank of New Berne, N. C., has declared an annual dividend of 6 per cent. and added \$2000 to its surplus fund. T. A. Green has been elected president, and H. M. Graves, cashier.

Financial Notes.

The National Bank of Elkton, Md., has elected Frank R. Scott as a director, succeeding Robert C. Lewis, deceased.

Dallas county, Alabama, desires a loan of \$40,000 for improvements. P. G.

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Wood at Selma will receive bids until November 6.	
The Middlesex Banking Co. of Connecticut has received permission to do business in Dallas, Texas. It is capitalized at \$1,000,000.	
Electrical Demand in September.—Installation of electrical machinery during September was noted. The demand for this class of apparatus showed a continuation of activity, as experienced by the Bullock Electric Manufacturing Co. of Cincinnati. Included in this company's list of September sales is noted an order for fifteen engine-type generators for United States army transports, ten 50-horse-power motors to operate at 200 R. P. M. for Messrs. Dick, Kerr & Co. of London, England; the Maryland Steel Co. sent the company a third order, a Brooklyn (N. Y.) brewery sent a third order, a Pennsylvania cement company sent a fifth order and a Missouri lead and zinc company a third order. This duplication of orders by prominent concerns cannot but signify complete satisfaction with the Bullock machines. Bulletin No. 1325, describing type "N" motors, issued in standard size suitable for filing, can be had on application.	